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ILLUMINATION CONTROL FOR THE MODERN THEATER

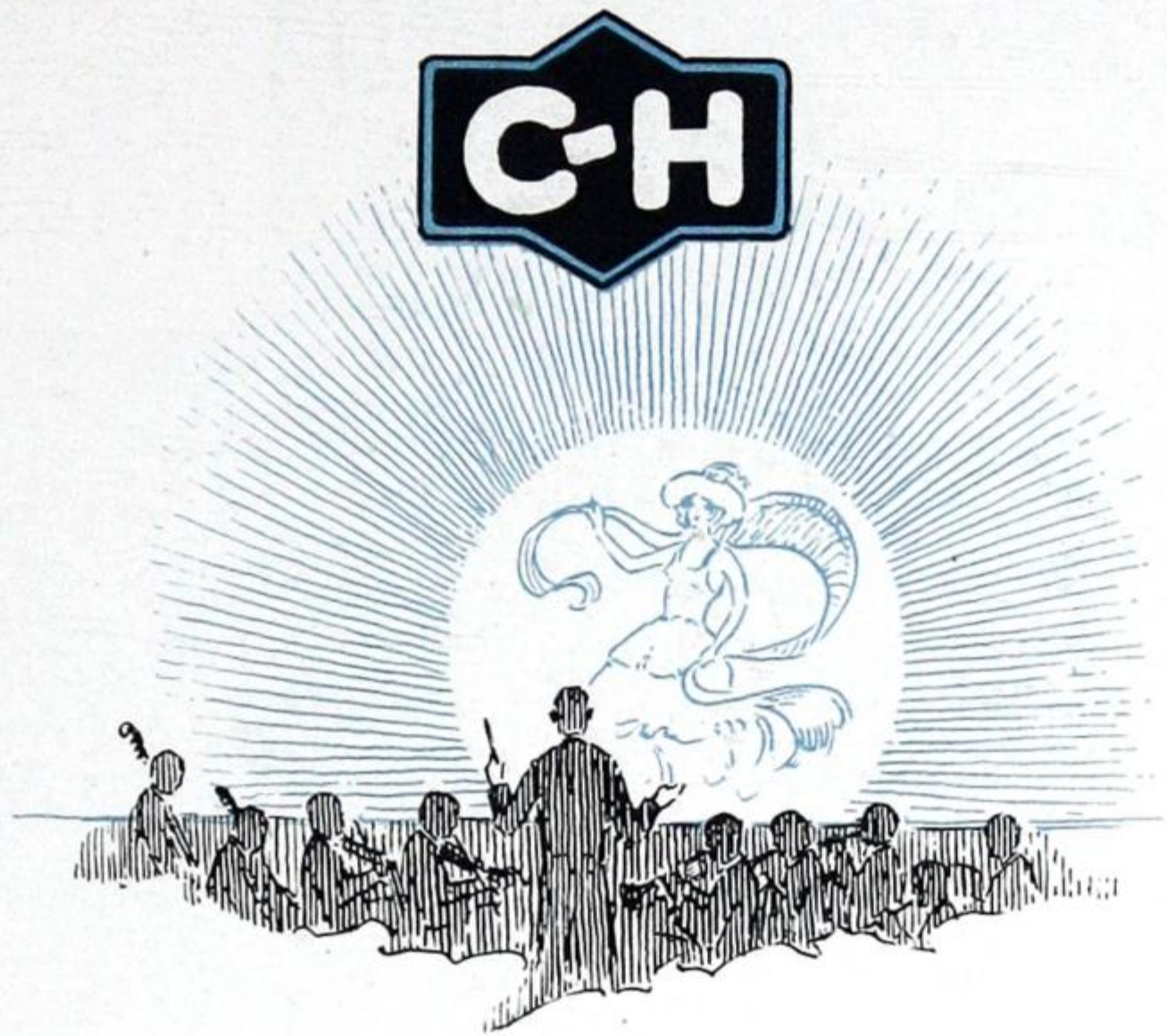
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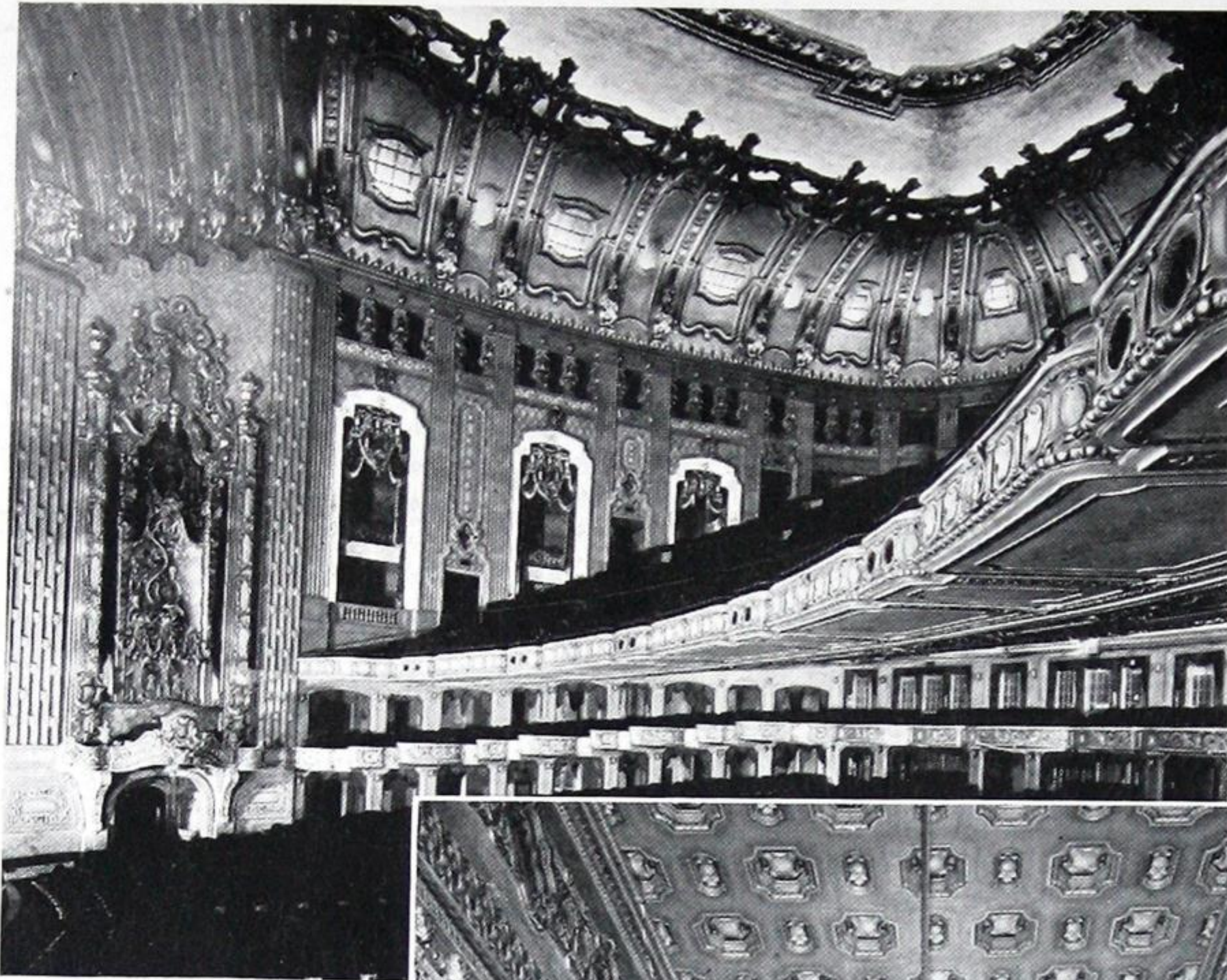
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Illumination Control *for the* Modern Theater



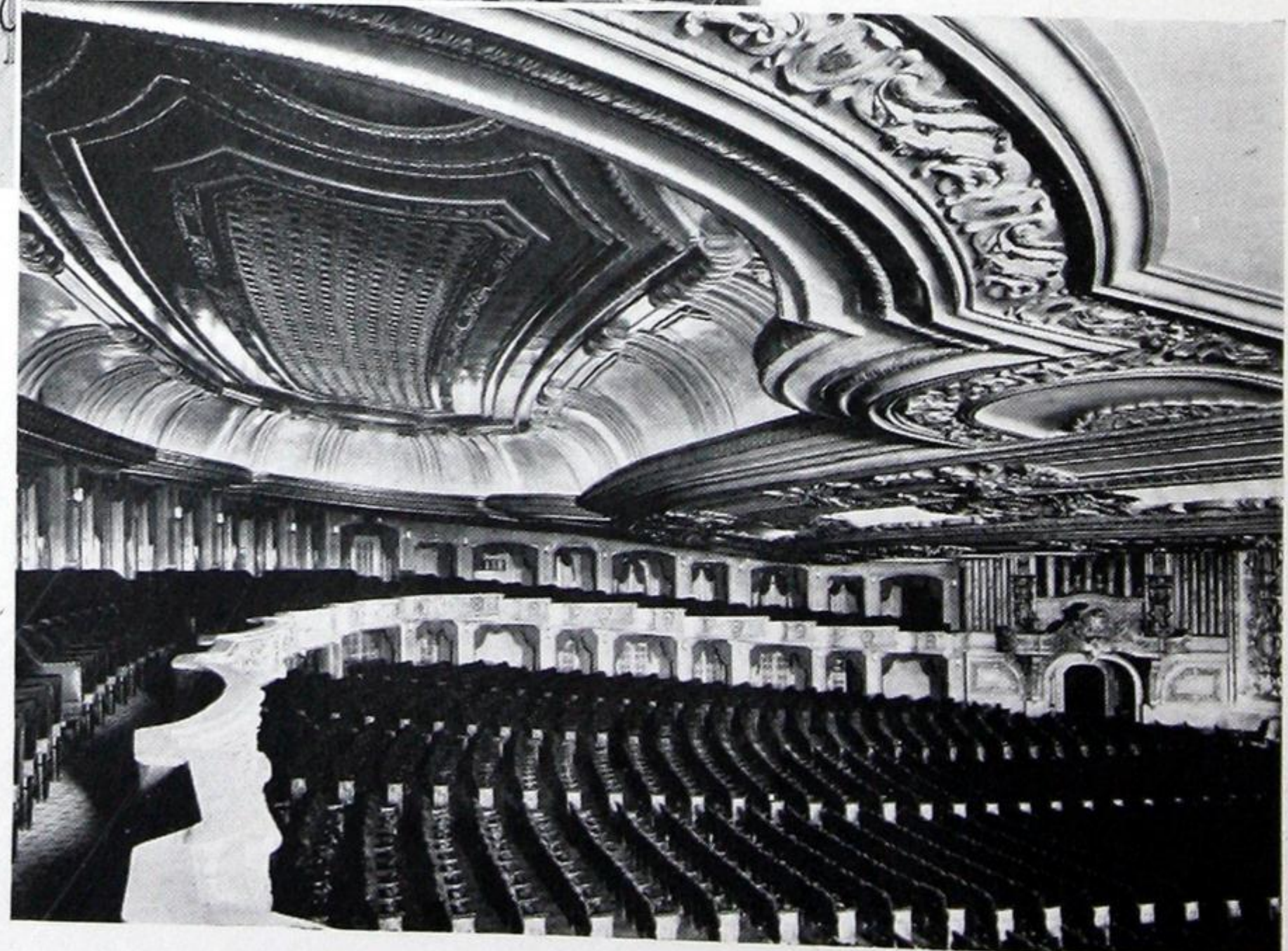
The **CUTLER-HAMMER Mfg. Co.**
MILWAUKEE WISCONSIN



Beautiful architecture and comfortable seating are doubly effective in the theater when the witchery of modern illumination control is employed throughout the house to create an atmosphere of softly changing beauty—suited to the mood of the play progressing on the stage or screen.




Whether the theater is small or large, modern control of all lights, throughout the auditorium as well as the stage creates the "atmosphere" which means steady patronage. These views are taken in the Uptown Theater, Chicago. Notice how illumination is provided in the ceiling—all controlled by Cutler-Hammer Dimmers. (Rapp and Rapp, Chicago, Architects).



Illumination Control for the Modern Theater

Increasing patronage
through up-to-date theater dimmer practice.



LEAVING behind the cares and worries of the day, the modern audience enters your theater to be entertained. These men and women want to relax, to enjoy themselves and forget their cares and worries. They expect a good show, a good picture or play presented in proper environment. They want surroundings different than ordinary; they have enough of ordinary things every day.

The theater with an entrancingly different atmosphere — such an atmosphere as created by pleasing architecture, decorations, and the effects secured by fitting music and proper lighting — appeals to them. Each has its part in getting your audience to relax and enjoy the performance. They leave the playhouse feeling that they have received their money's worth! — an important consideration because every play or picture can not, alone, appeal to everybody.

Lighting effects are part of the program.

Proper lighting effects have always been one of the essential features of dramatic productions. Even the savages waited for the weird lighting of the moon to hold their most impressive ceremonies. From the earliest miracle plays down to the present day miraculous presentations, the appeal to the eye has been considered an important factor in the theater.

The effect on the audience wrought by shifting color harmonies of light on stage and auditorium is of tremendous power. Accentuating the mood of story or music, these changes of light and color carry the audience on a veritable magic carpet to the "land of make believe".

Modern lighting equipment and control has given theater men of today powerful instruments by which they secure just the effects desired.

The lighting effects and variations made possible by thoroughly modern theater dimmer equipment

are practically limitless. Both stage and auditorium illumination may be controlled at will from a single point — the proper blending, brightening and dimming being available for every change of scene. With each successive number the house may be bathed in whatever glow will best accentuate the mood.

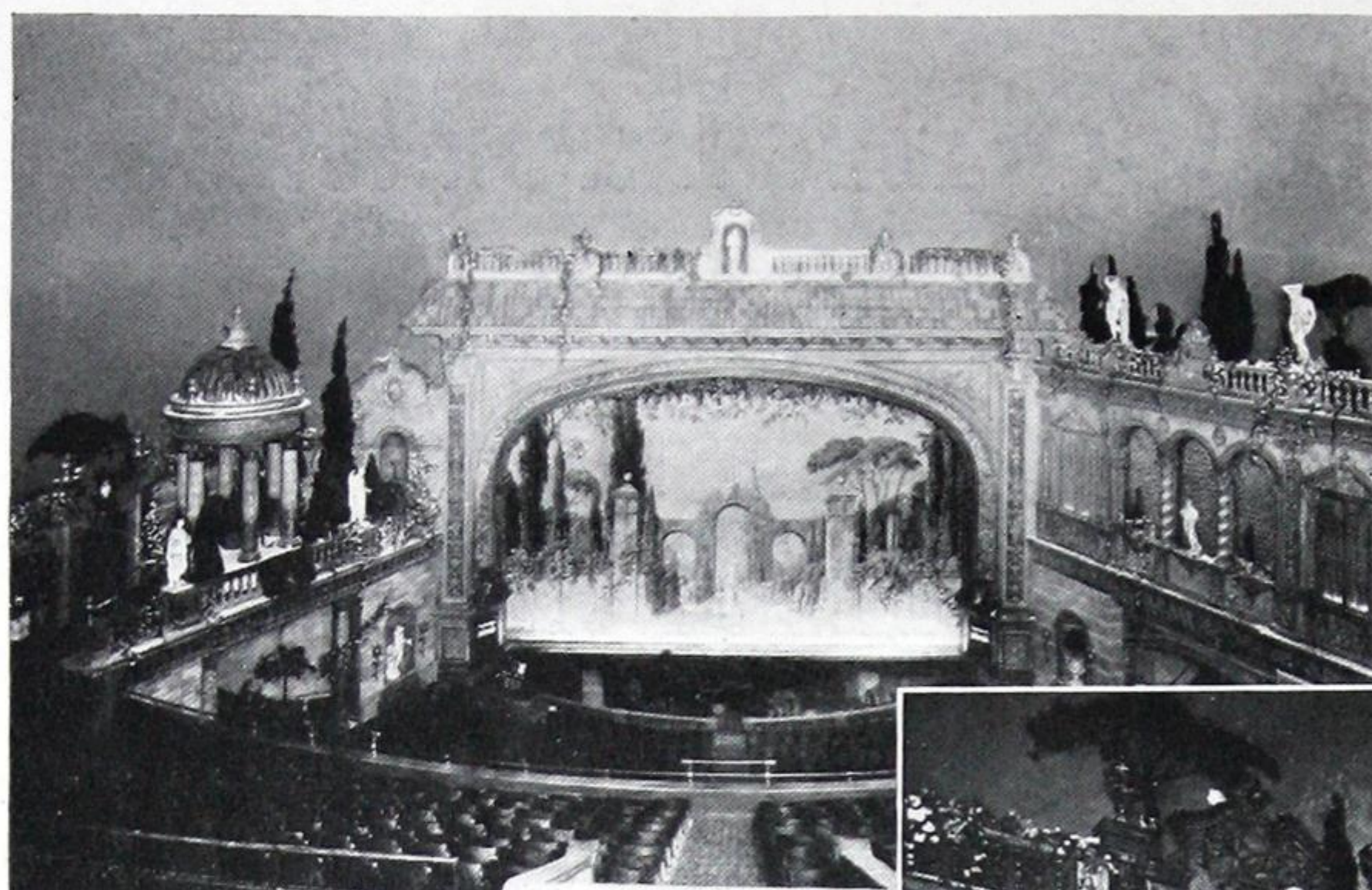
The decorative scheme of the theater may actually be changed to be never twice alike throughout the performance — yet always a marvel of delicate beauty. Hundreds of colored bulbs at every possible vantage point in the theater can be perfectly controlled to create any impression from the palest moonrise to the hot glare of the Sicilian midnoon.

Since electricity was first used for theater lighting, Cutler-Hammer Dimmers have set the standard for proper light control. The present high stage of their development makes possible the marvelous lighting effects which means so much in increased and steady patronage to the theater owner.

Theater dimmers control the volume of light from any group of lamps. They are so connected that the control of all the lights for any one circuit is convenient. See photograph pp. 6. Thus, the Dimmers which control all the foots may be arranged in the first vertical row of dimmer plates, while all the white lights are in the first horizontal row. Next, in the vertical row, come the border lights, and in the horizontal row the blue lights, and so on — with as many vertical rows as there are groups of lights in the house, and as many horizontal rows as there are colors.

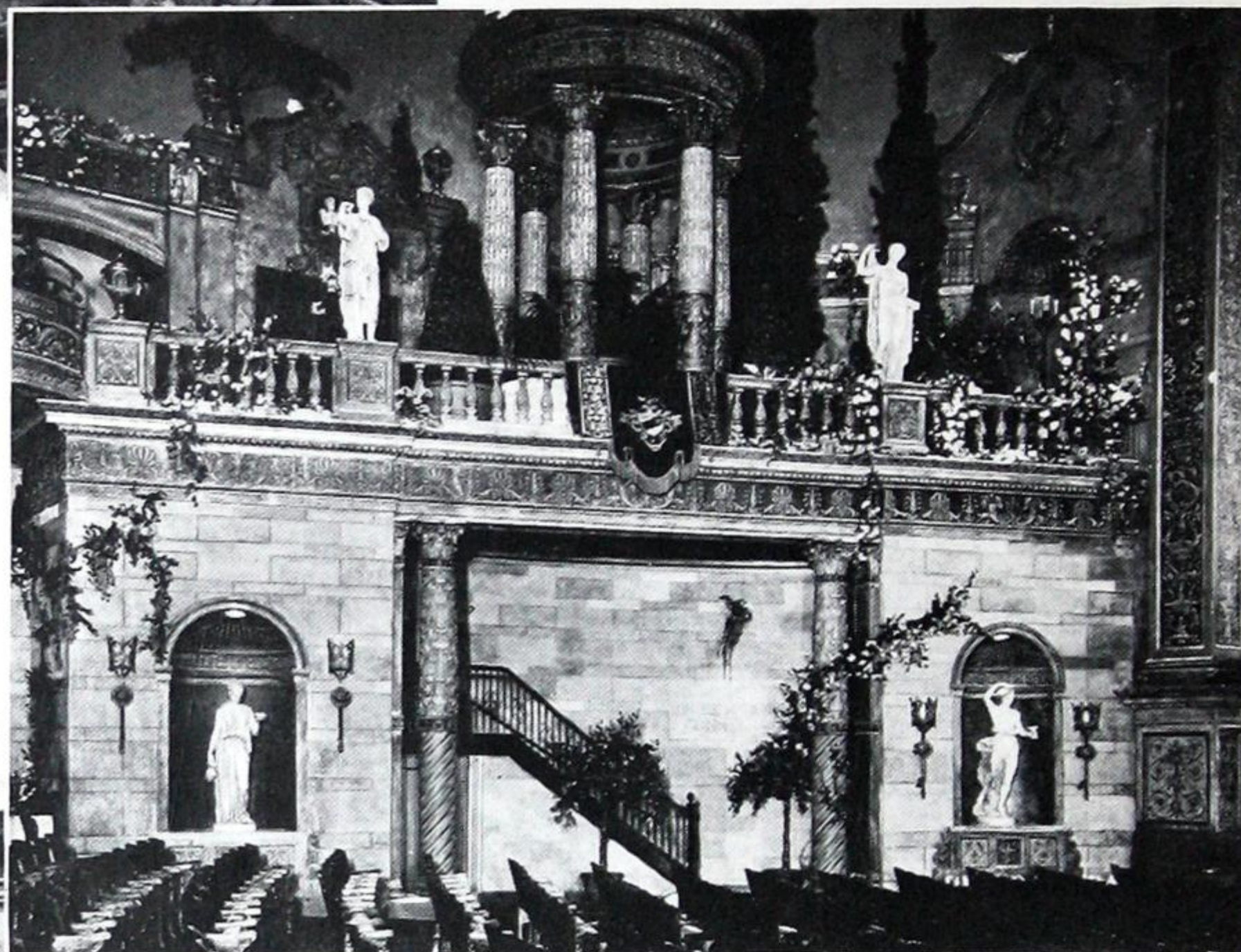
All foot lights being together in a vertical row, it is very easy to control the volume of light desired from any particular color of lamp in that group. Cutler-Hammer Dimmers provide means of so interlocking the lights, that by moving one master control lever, the lights on one circuit may be dimmed and those on another brightened. At the same time, the colors of any circuit are likewise dimmed or brightened.

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Carrying the patrons off to a veritable "Land of Make-Believe," modern lighting control in the Grand Riviera Theater of Detroit contributes largely to the popularity of this house. The intimate feeling created by illumination which makes the entire auditorium a part of the stage has a powerful effect upon the audience.

Softly changing light harmonies, masked behind columns and ballustrades, in niches, coves and candelabra enhance the architectural beauty of the theater's interior. Various lighting combinations, playing upon the statuary and decorative detail can give a constantly changing scene throughout the performance.



The Grand Riviera Theater, Detroit, John Eberson, Architect, is equipped, as are most of the finer theaters of the country, with Cutler-Hammer "Simplicity" Dimmers. The dimmers and switchboard permits remote control and pre - selection of lighting scenes. They are installed by the Major (F. A.) System.

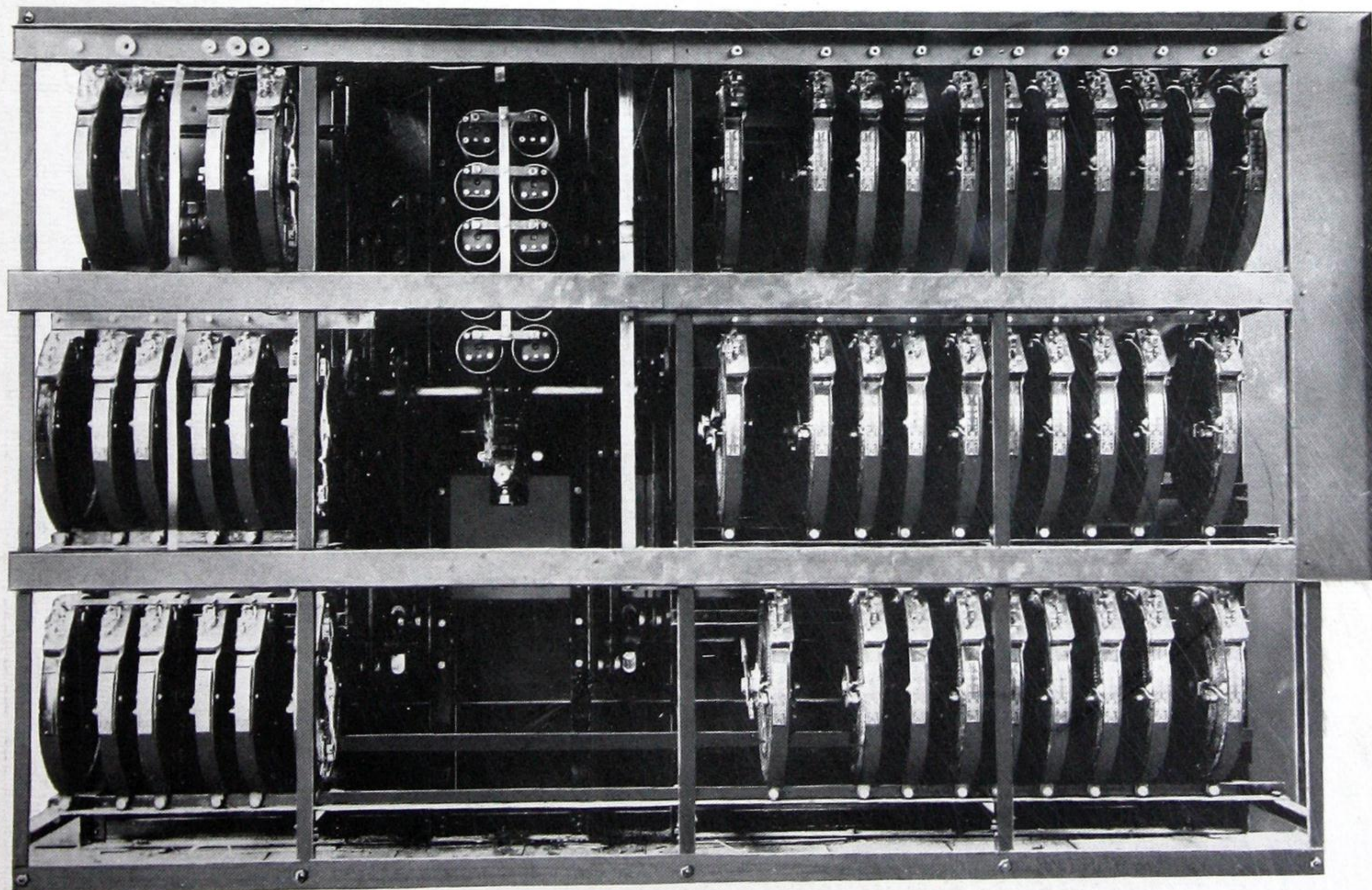
For instance, it may be desired during a scene to dim the white lights in the foots to a combination of amber and blue, with blue predominating; and to change the border lights from a combination of red and green, with green predominating, to a combination of blue and white, with white predominating. This is all done by quickly setting the individual control handles for each bank of lights and then moving the master control. The effect is one of gradual blending of colors from the previous "set-up" to the one desired.

The success which has been achieved in illumination control in the outstanding theaters of the country — most all of which are equipped with Cutler-Hammer Dimmers — is indicative of the possibilities of this profit-making attraction for the smaller house. There is no limitation on the size of the house in which modern lighting control may be used to profit and advantage. It is just as successful in the 300-seat house as in the house with a seating capacity of 5,000 — and no theater regardless of size may be considered "modern" without it.

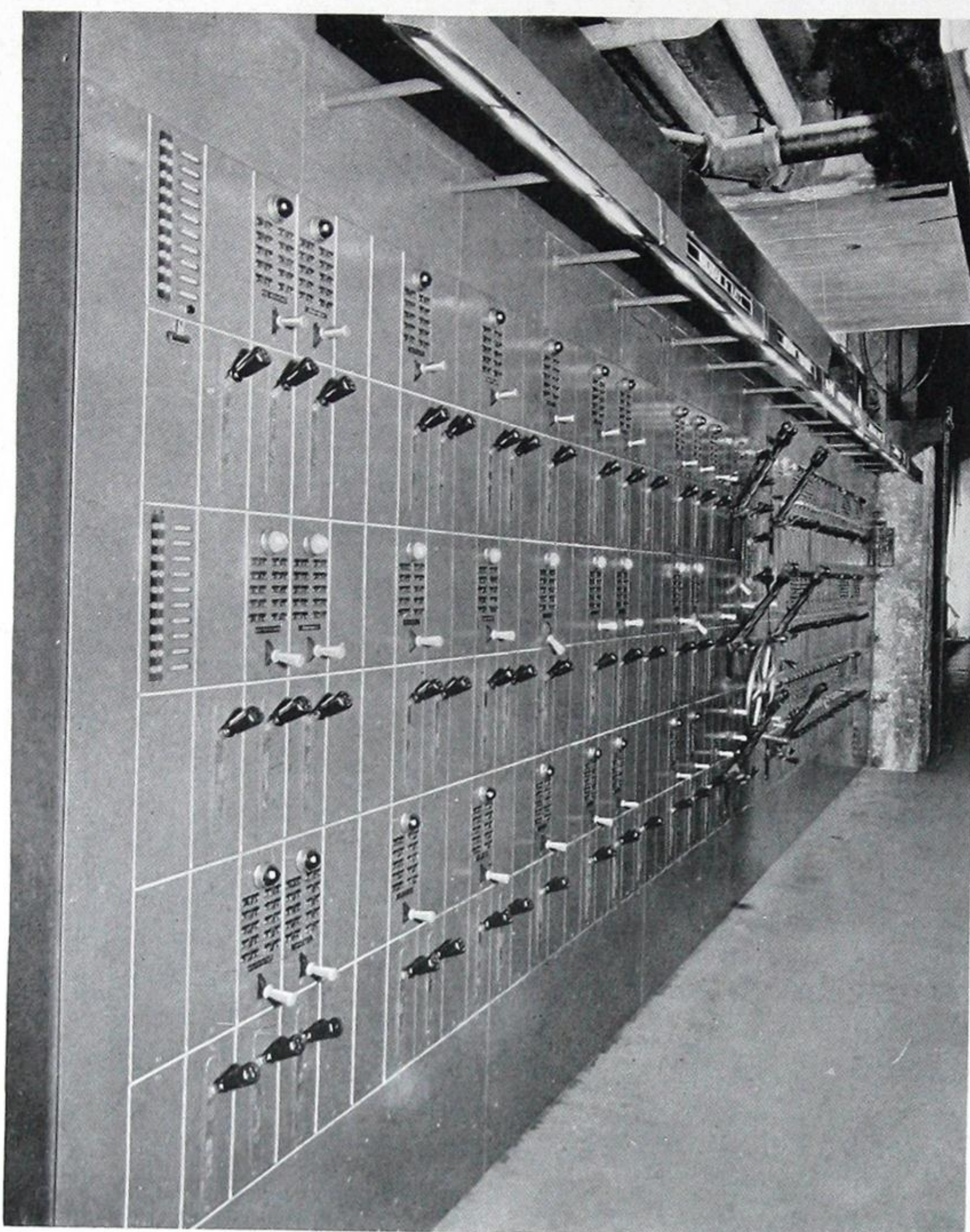
Qualities the dimmer bank must possess.

To obtain in the highest degree the marvelous results possible with proper dimming equipment consideration must be given, in their selection and installation, to the technical requirements of this type of apparatus.

The theater dimmer, placed in series with the lamp load to be controlled, introduces a variable resistance into the circuit to dim or intensify the illumination gradually. The full range of control is from "full-bright" to "black-out" within the arc of travel of the dimmer lever. If more resistance than necessary is used, the lamps will be faded out before the lever has completed its travel arc, and the resultant dimming will be jerky or "flickering" and therefore noticeable, instead of smooth, subtle and effective. If less resistance than necessary is used, the lamps will still be luminous when the lever has completed its travel arc, or, in stage parlance, the lamps will not be "black out." It is immediately apparent therefore that for smooth, flickerless operation and subtle color blending the design of the dimmer is extremely important.

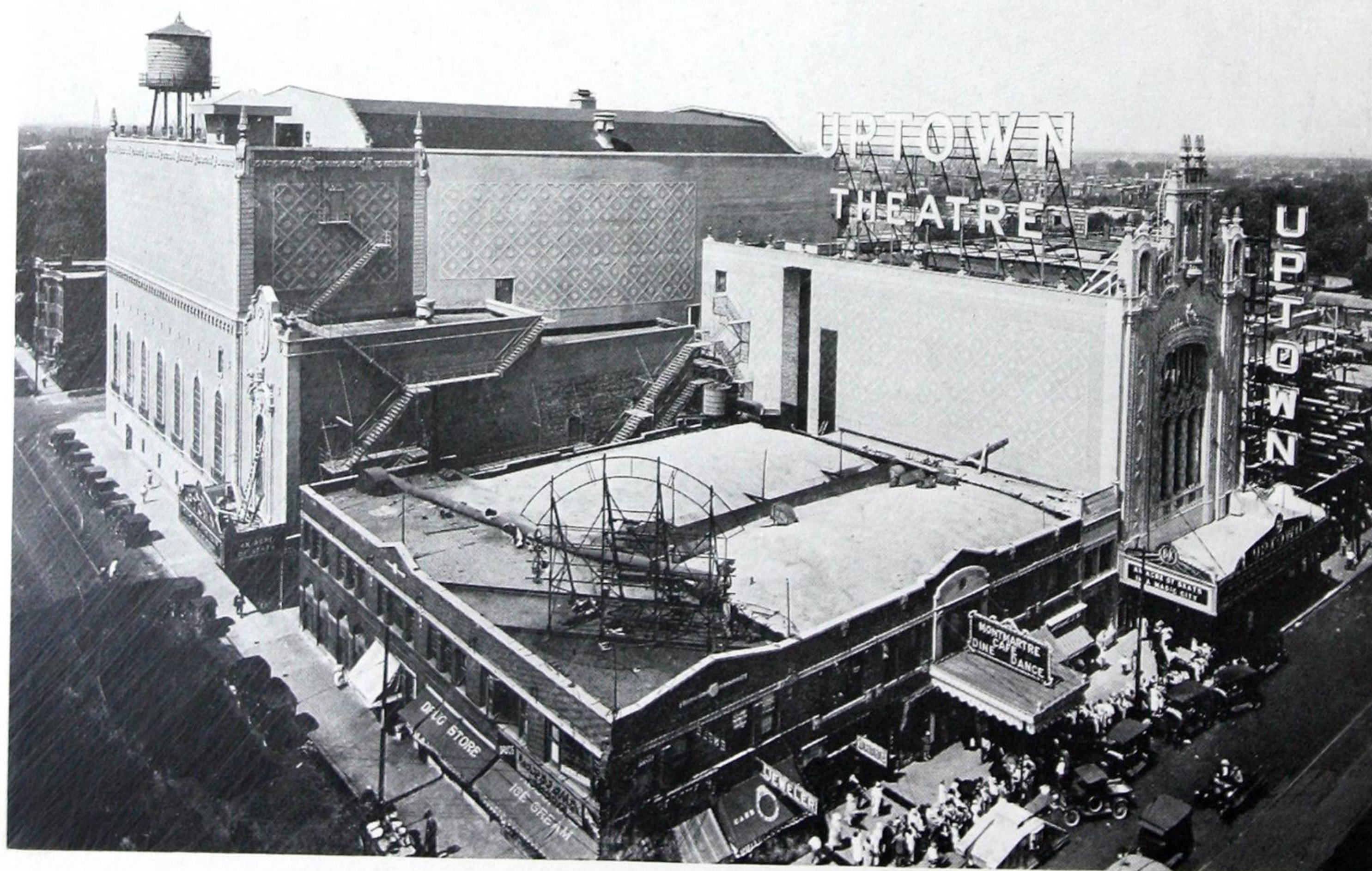


A rear view of the all-master and modified control pilotboard in the Grand Riviera Theater, Detroit, showing the banks of C-H "Simplicity" Dimmer Plates which control the illumination.



At the left is shown the Major (F. A.) System pilot board used in connection with Cutler-Hammer Dimmers at the Uptown Theater, Chicago. With this equipment ten scenes can be set up at one time and any combination of lighting can be controlled entirely by the action of one switch. Scenes may progress forward or backward or in any rotation.

The exterior of the theater shown below displays electric signs which have a total connected load greater than the combined sign load on four of Chicago's large legitimate houses. C. W. and George L. Rapp were the architects of this Balaban & Katz theater.



Accuracy of the dimmer winding, means for dissipating the resultant heat energy and convenient size of unit resistors to permit grouping into large banks, and the possible future insertion of additional units, are vital factors in the design. Ruggedness of construction, convenient, centralized control and silent operation are further essentials. By its very nature being a piece of apparatus subjected to alternating heating and cooling, all combustible material and materials which would deteriorate through continued temperature changes must be eliminated from the dimmer construction.

For flickerless, smooth, fading of the lamps from full luminosity to "black-out" the dimmer winding must be proportioned with the greatest accuracy and designed so that the travel of the hand lever through the course of its arc involves a maximum number of steps, making each individual change in illumination so fine as to be hardly apparent.

How C-H "Simplicity" Theater Dimmers embody these essential qualities and many more is described below:

Advantages of C-H "Simplicity" Dimmers.

Flickerless. A double-ended, balanced contact lever with brushes at either end reduces side wear on the supporting hub and bearing to a minimum in C-H "Simplicity" Dimmers while the use of direct rack and pinion drive completely eliminates back lash and lost motion. There is therefore no overlapping of contact brushes and the operation is entirely smooth and flickerless.

110 steps from full brilliancy to "black-out". The unparalleled smoothness with which C-H "Simplicity" Dimmers "fade" either vacuum or gas filled lamps

from full brilliancy to "black-out" is directly due to the many steps over which the brush contacts travel in their course. This so minimizes each individual change in illumination that it is practically imperceptible to the eye.

By thorough, painstaking analysis and the testing of many different resistance layouts a proportioning of the resistance has been achieved which provides

perfectly equal dimming throughout the 110 steps from full brilliancy to "black-out."

Velvet control. —

Smoothness of action at the operating lever is essential to obtain velvet-like changes in illumination no matter how perfectly the resistor element may be designed to give suitable dimming.

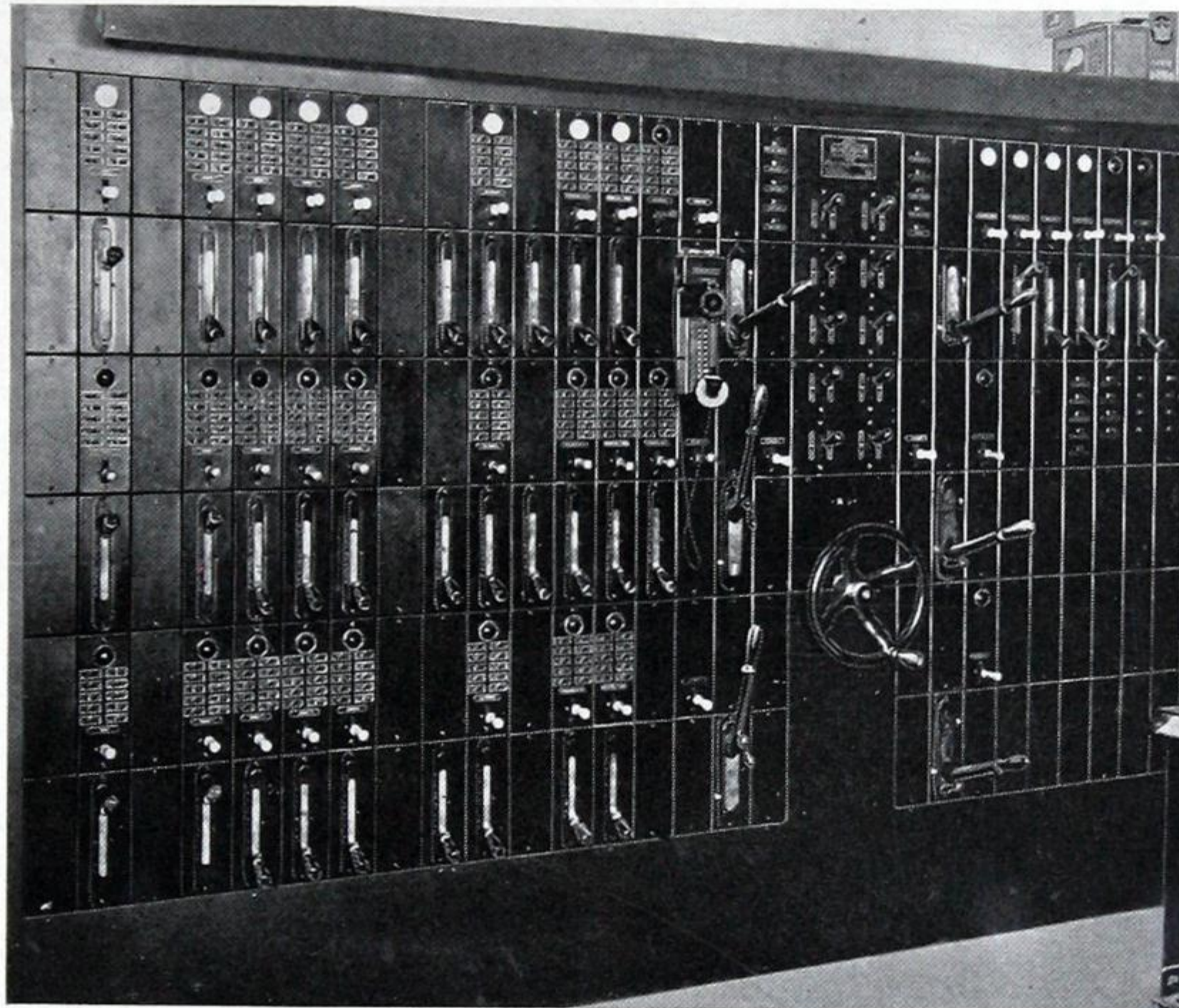
This is accomplished in the C-H "Simplicity" Dimmer by the direct acting rack and pinion drive and the self lubricating contact construction. The rack rod guide holds the

rack and pinion in close relation without excessive friction and the pitch of the pinion and rack teeth has been worked out to provide a perfect mesh. Because of the small amount of power necessary, the teeth require no lubrication.

The length of the operating levers makes it possible to obtain very gradual movements, eliminating jerky motions and consequent poor dimming effects.

In connection with these levers it should be noted that while the contact lever moves through an arc of 180 degrees, the throw of the operating lever is only 55 degrees, the angular motion of the latter being multiplied by the rack of the driving rod and the pinion which revolves the contact lever. The operator is thus required to move the lever a comparatively short distance through an arc which comes conveniently to his hand.

Cophite contact brushes—self-lubricating. The scientific combination of graphite and copper ("Cophite")



The C-H Magnetic Switches used in conjunction with C-H Dimmers in the Grand Riviera Theater, Detroit, which permit pre-selection and remote control of lighting scenes. This is a Major (F. A.) Board.



The Tivoli Theater, Chicago, Rapp & Rapp Architects, is equipped with a bank of 130 C-H "Simplicity" Dimmer Plates employing 98 Individual levers controlling the lights throughout the house and stage through a Major (F. A.) switchboard. Three crystal chandeliers in the lobby of this house, each 15 feet high, are provided with 3-color lighting equipment which gives very beautiful effects. The lobby is a replica of the peace treaty hall in Trianon Palace, Versailles.

The seating capacity of this house is 4500.

The Chicago Theater is another of the many Chicago houses which find that C-H Dimmers "best meet the requirements" of modern day lighting practice.



The Capitol Theater, Chicago, is another typical Cutler-Hammer installation of merit. C-H Dimmers provide the ease of control necessary to produce the various color harmonies.



of which the contact brushes are formed, combines the continuous lubricating qualities of graphite and the perfect commutating property of copper. This brush operates with less noise, less wear and less friction than any material yet discovered for the purpose.

The stationary contact buttons are of brass, ground to a smooth, even surface. They do not oxidize as copper and thus minimizes heating at the brushes. The pressure spring is located away from the dimmer plate and subjected to the least amount of heat.

Designed for continuous duty and severe service. C-H "Simplicity" dimmers are designed for the continuous, severe, long-hour service to which moving picture houses in particular subject them.

The construction and material of the dimmer resistance plates have the ability to withstand accidental or temporary abnormal loads, such as exist in theater practice.

Do not overheat or burn out. All parts of a theater dimmer are subjected to alternate heating and cooling. For this reason material which does not deteriorate through the temperature changes is used in making C-H "Simplicity" Dimmers.

The bases of the dimmer plates are of soapstone. This material has a very high continuous load capacity because of its high heat absorbing characteristics.

The soapstone plate has high insulating qualities, which combined with its ability to absorb heat, means that C-H Dimmers are ideal for continuous service. This is an important feature in modern dimmer practice.

The contact brushes are carried in an all-metal arm and the terminals are held in position in a heat resisting terminal block of moulded insulation.

Terminals mounted on solid block of insulation. Wiring terminals of C-H Dimmers are mounted on a solid block of moulded insulation eliminating the necessity of insulating bushings and removing the possibility of grounds. The terminals are placed at least one-half inch from any grounded metal. They are readily accessible for wiring and thus make installation costs so much less.

Current carrying parts perfectly insulated. All the current carrying parts are perfectly insulated from the operating levers, rack rods, pinions, frames, etc. making C-H "Simplicity" Dimmers thoroughly safe for the operators and eliminating the possibility of short circuits.

Compact. The standard C-H "Simplicity" Dimmer Plates are constructed with a view to compactness in every detail commensurate with strong, accurate construction, and the incorporation of a sufficient number of steps to insure gradual, flickerless dimming. This compactness insures ease of installation in limited space.

Up to certain load ratings C-H Dimmers can be supplied with a different winding on each side. This gives the dimmer three different lamp capacities, a feature which every electrical man will recognize as making for compactness in installation. It is possible, due to the ability of the soapstone bases to stand very high heat without burning out.

Refinements of control permit every lighting combination

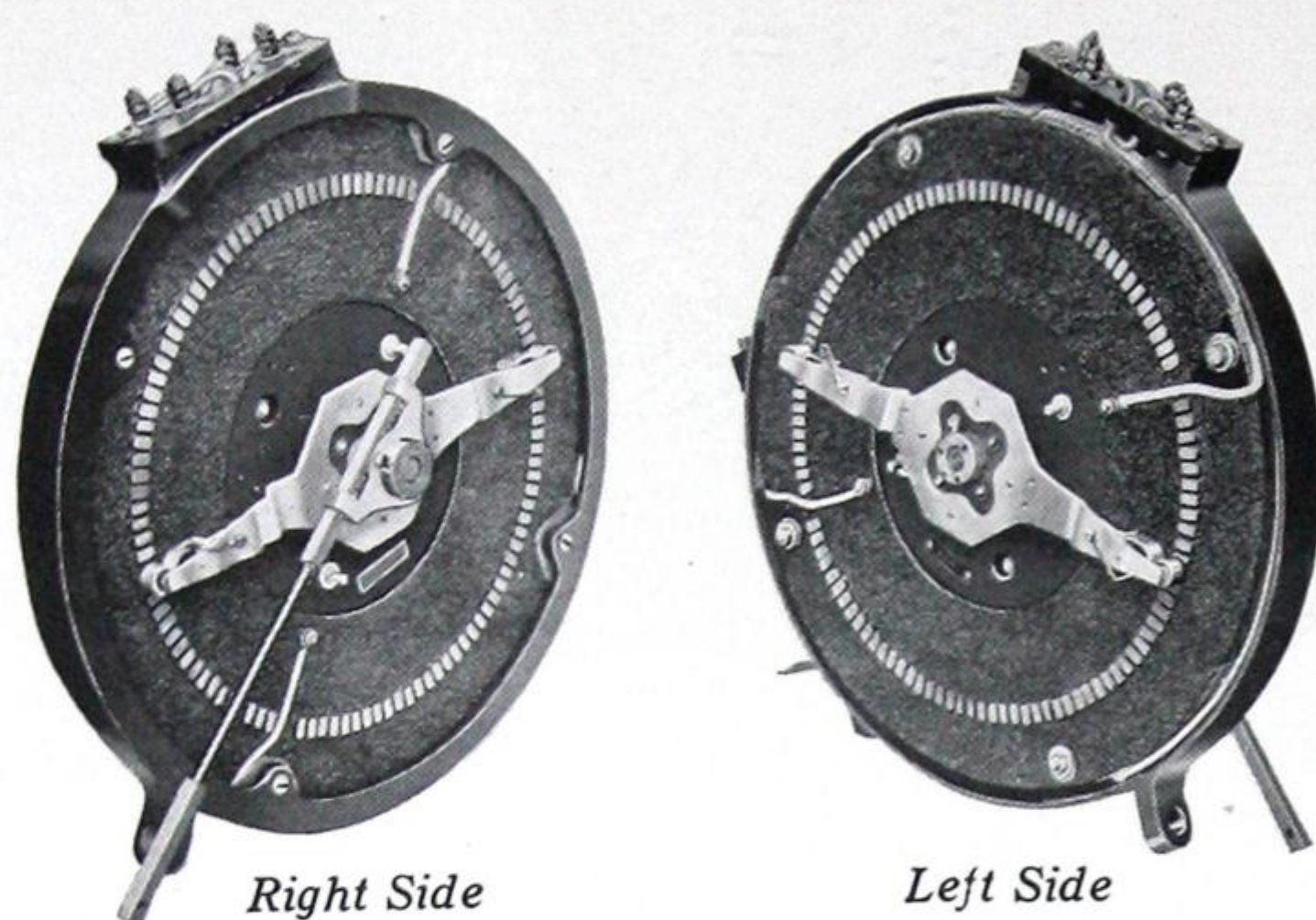


THE C-H "Simplicity" Dimmers, placed in numerous banks and rows, vertically by circuits and horizontally according to color, permit every conceivable combination in lighting and dimming through the various master and interlocking controls which have been devised. The interlocking, non-interlocking, cross interlocking, individual color master, grand master and slow motion individual color control together with the slow motion, grand master interlocking and slow motion cross interlocking controls have all been worked out as standard features of C-H Dimmers.

By means of these various controls the dimmers may be operated individually or ganged together to dim or brighten any combination of circuits or colors.

The interlocking mechanism makes it possible to control all the lights of a certain color simultaneously, or a particular group of the lights together without affecting the remaining lights in the circuit, or to raise some of the lights of the circuit partially in advance of others of the same color and then, after an interval, to bring all the lights of that color up to full candle power.

The plates controlling the lamps which are to be



The high heat absorbing and insulating qualities of the soapstone base used in C-H "Simplicity" Plates permit the placing of resistance windings on both sides of the plate up to certain capacities. This double sided, two-lever dimmer is a great space saver and can handle loads of three different capacities efficiently.

brightened in advance of the others are first operated by means of their individual levers. When the moment arrives for brightening the other lamps, the master lever is called into service to operate in unison all the plates interlocked with the shaft.

The plates which control the lamps which have already been partially brightened will not be in interlock at first, but as the shaft is revolved by the master lever the cams fixed to this shaft are turned until a point is reached where the slot in each cam comes under the corresponding bolt of the individual levers which were first raised. These bolts will then drop into the slot, interlocking the individual levers with the shaft. From this point on the lamps controlled by the newly interlocked plates will respond to the master lever.

Thus the operator is enabled to set individual levers at points giving various degrees of illumination and then pick up one after another by employing the master lever alone.

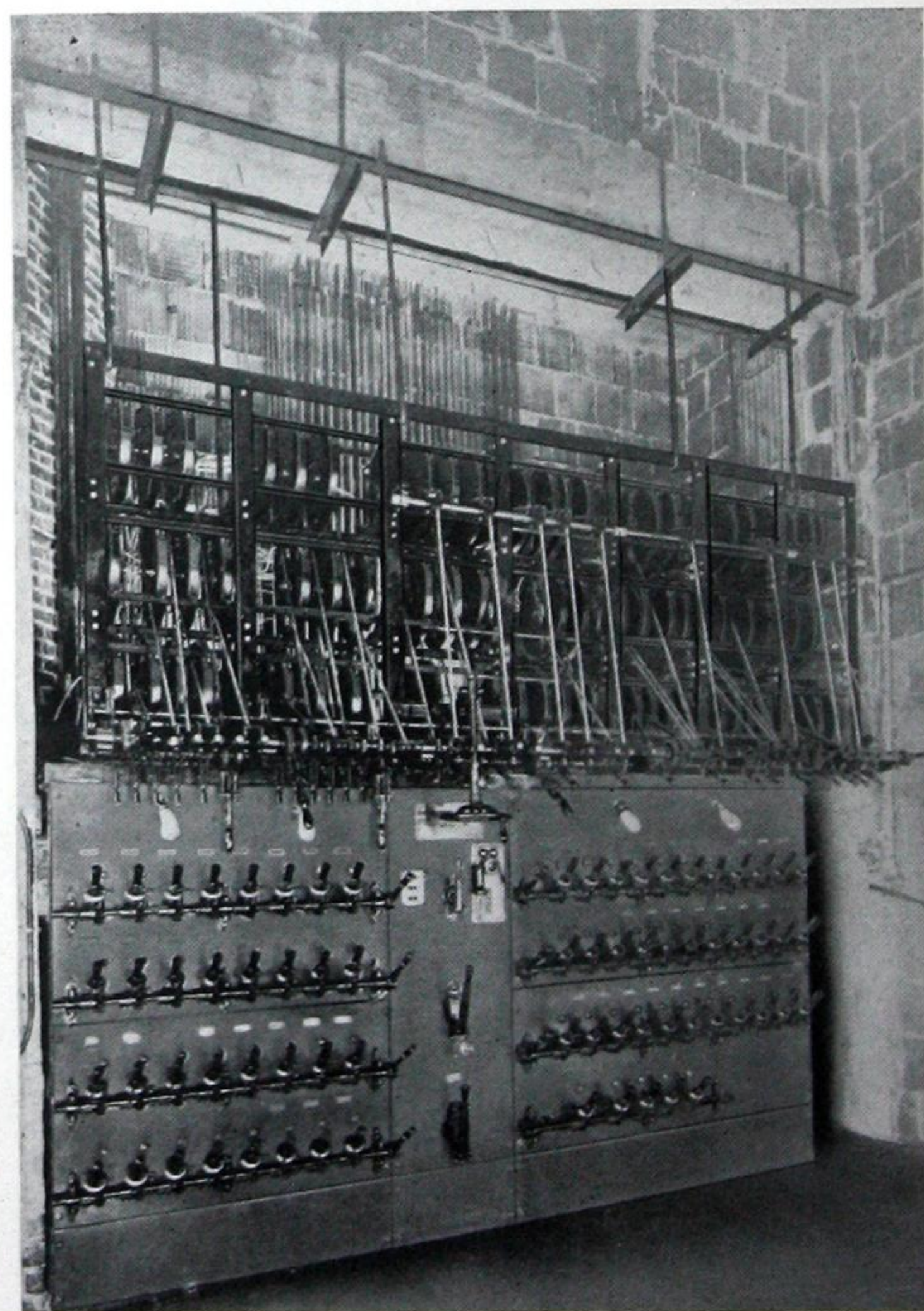
Any or all of the plates in two or more horizontal rows may be similarly operated in unison by means of a grand master lever working through bell crank connections between the horizontal interlocking shafts. Thus certain groups of red lamps may be brightened simultaneously with certain groups of blue by throwing these particular groups into interlock in their master lever shafts and operating the two master levers together by means of the grand master lever.

A still further refinement of control is obtained by the hand wheel drive, which makes it not only possible to dim or brighten any number of lamps at

one time, but also to dim some and brighten others at the same time. In addition to this advantage, the wheel drive possesses the merit of enabling the operator to obtain a slow, smooth motion causing the lamps to glow or fade by imperceptible degrees. Thus white lamps may be dimmed and amber lamps brightened at the same time to simulate twilight effects; amber lamps dimmed and red lights brightened at the same time for sunset; red lamps may be dimmed and blue lights brightened for moonlight.

With such an equipment as is illustrated on page 11, any of the following combinations can be obtained:

1. Any single plate can be operated alone by means of an individual lever.
2. All plates in any row can be operated in unison by means of the master lever, in the center of each row.
3. Any number of plates in any row can be interlocked and operated in unison by the master lever while other plates in the same row, but not interlocked, remain inoperative.
4. All plates in any two rows or in all three rows can be interlocked and operated in unison by the master wheel.
5. Any combination of plates in any two rows or in all four rows can be interlocked and operated in unison by the master wheel, while plates not interlocked remain inoperative.
6. By rotating the handle of the master levers, shafts may be thrown into or out of interlock with either of the two vertical driving rods, enabling operator to dim any combination of lamps and at the same time brighten others.



Showing the banks of C-H Dimmers installed above the Mutual-built switchboard in the National Theater at Richmond, Va. The slow motion hand wheel may be seen at the center of the row of control levers above the board.

Classification and comparison of C-H Dimmer Types



CUTLER-HAMMER theater dimming apparatus is varied and complete to meet every set of operating conditions with the one most efficient type of illumination control, to give the results desired.

Broadly divided into the resistance and the reactance types, C-H Dimmers are provided in the following forms:

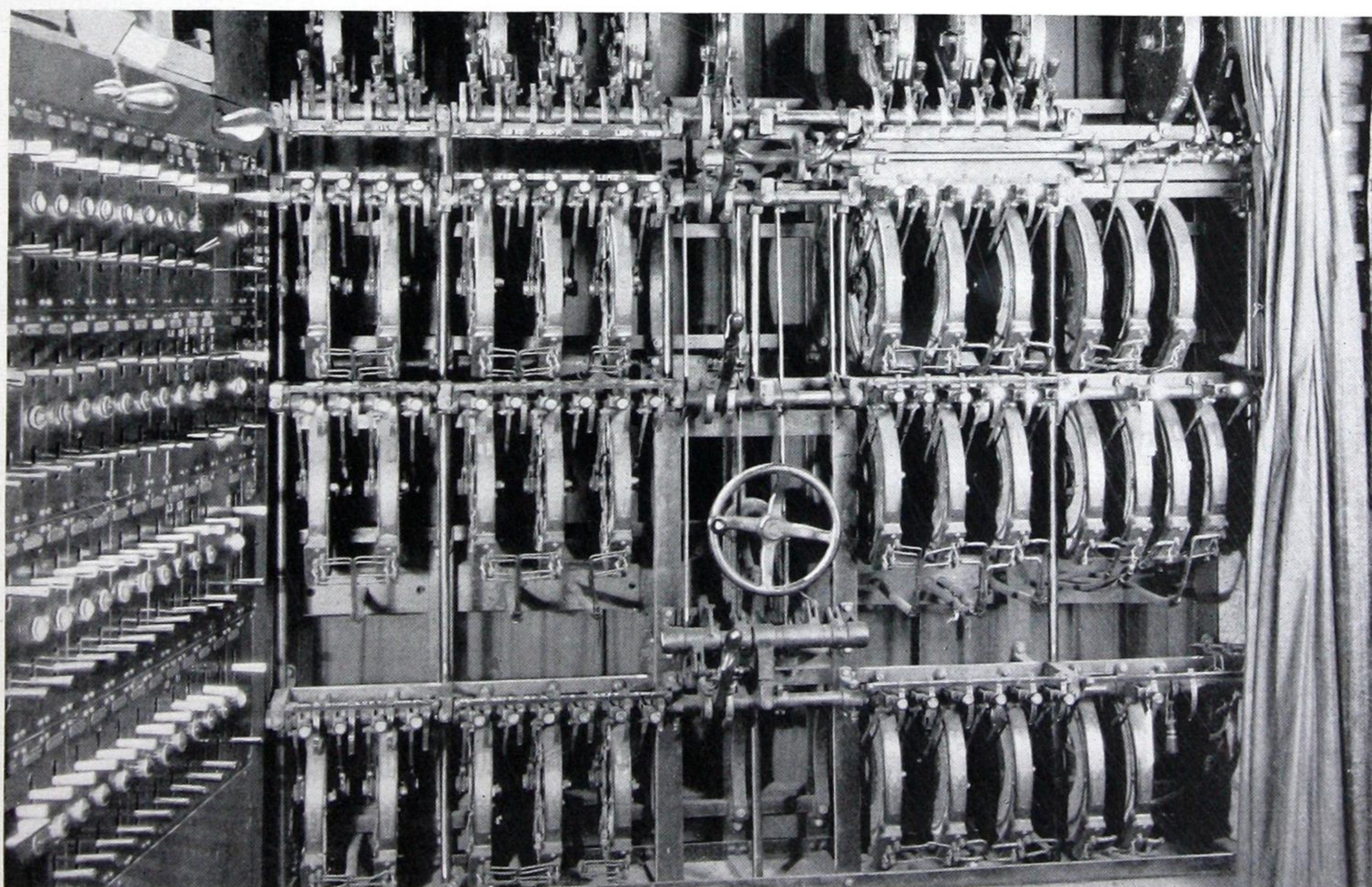
Resistance type circular plate "Simplicity" Dimmers. This is the type in practically universal use today as the many installations pictured in this booklet indicate. This plate is designed as a unit for mounting in banks as shown. They are arranged for interlocking.

Resistance type Circular plate individual dimmers. This type of plate is for churches, halls, lodges and other small public or semi-public auditoriums where the control of a single circuit only is required. They cannot be interlocked. The resistance is designed to dim the rated load to a dull cherry red instead of black out.

Resistance type slider dimmers. This unit (see under "portable Dimmers") is designed for mounting on spotlight pedestals, its shape being such as to suit it for direct mounting. It is operated by means of a slider handle moving up or down. This motion does not sway or upset the lamp. Slider dimmers may also be mounted in gangs for special lighting control in small halls.

Motor driven dimmers. These are comparatively small units particularly suitable for lodge halls, hotels, salesrooms, lobby displays, in the foyer of a theater and in connection with various attention compelling devices. Standard circular plate "Simplicity" Dimmers are employed and operated by small motors controlled from conveniently located push buttons.

Reactance type dimmers. This type of dimmer is particularly applicable where space is limited and where a number of large circuits are to be controlled. The dimmer may be installed in a basement or other out of the way place with a small control board located where convenient.

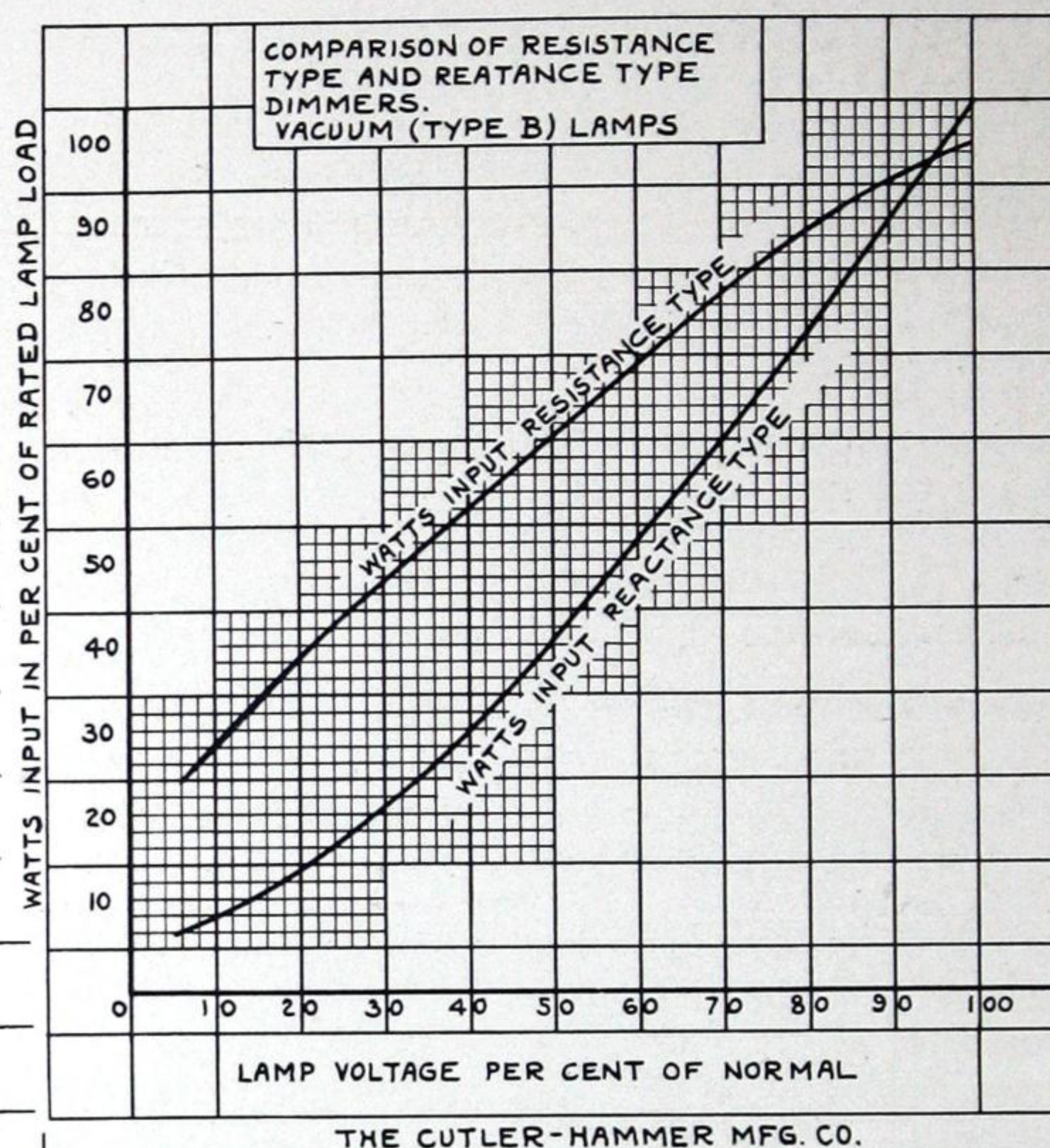
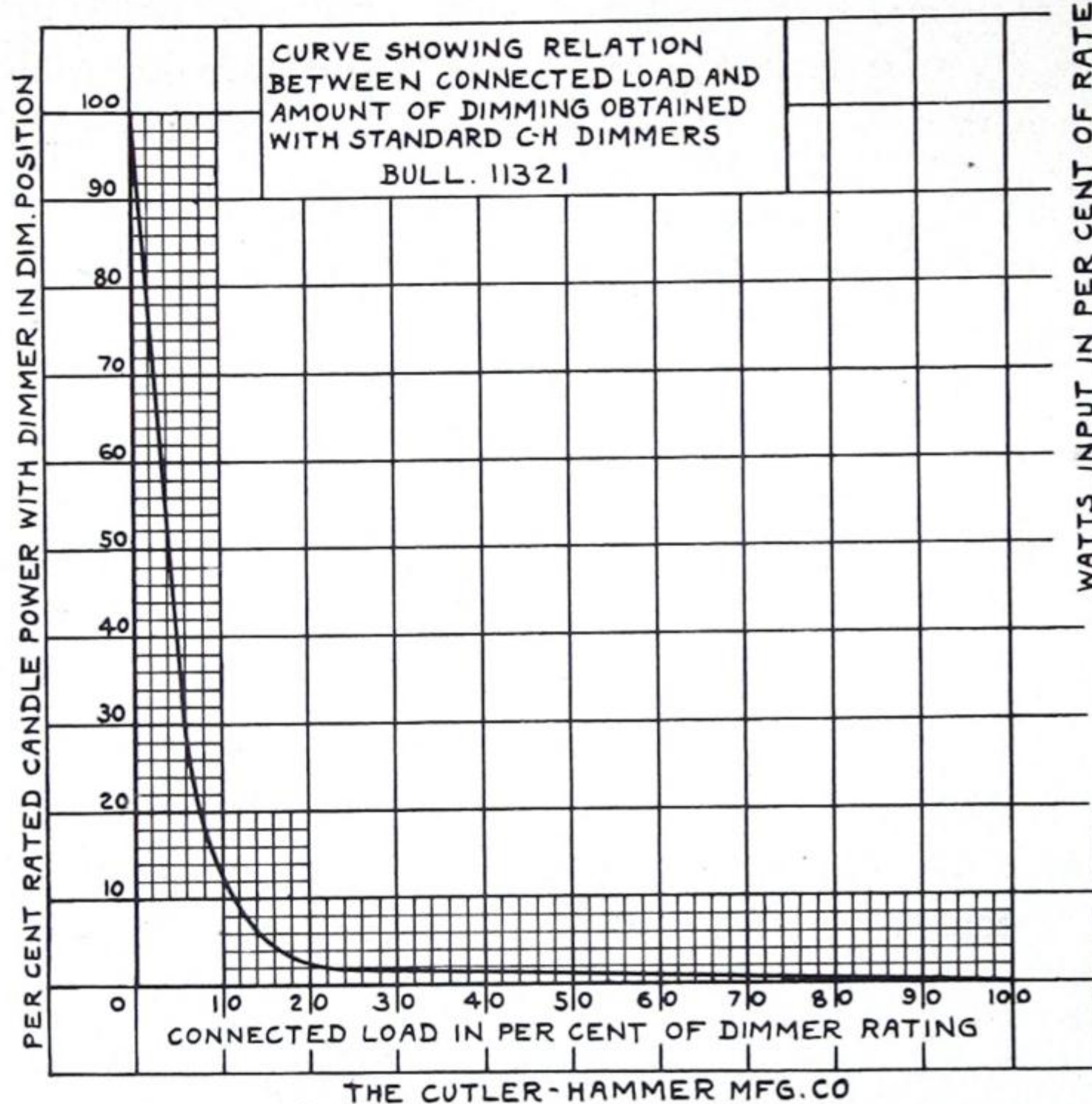


This installation of C-H "Simplicity" Dimmers in the Hanna Theater, Cleveland, shows the slow motion hand wheel by which various groups of lights in different rows may be slowly dimmed together, brightened simultaneously, or dimmed while another group is brightened. Gradual dimming and very beautiful color effects are thus made possible. The switchboard at the left is a Major (F. A.)



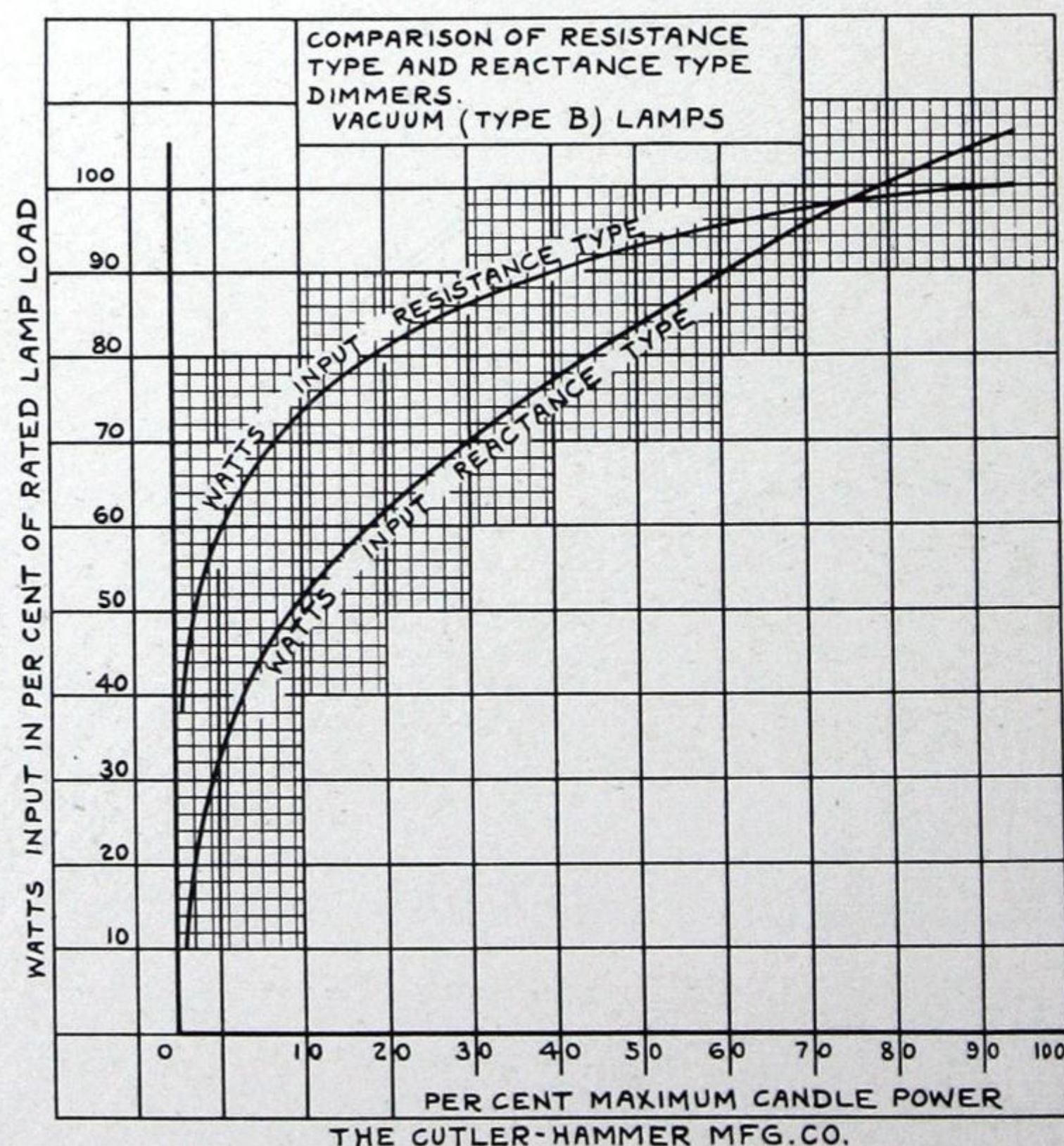
Comparison of resistance and reactance type dimmers

The chart at the right shows the comparative efficiency of dimmers of the resistance and reactance types at different lamp voltages. A considerable saving in energy, it will be noted, is effected by use of the reactance type.



At the left is shown the relation between the connected load and amount of dimming obtained with Standard C-H "Simplicity" Dimmers.

The curves plotted at the right show the comparative candle power with the two types of dimmers at different percentages of the rated lamp load. This curve, too, shows the economy in energy of the reactance type.



Motor driven theater dimmers for halls, hotels, salesrooms and like applications



MOTOR driven dimmers are particularly suited to illumination control applications for salesrooms, hotel dining rooms, halls, and in connection with various attention compelling devices where a continuous cycle of softly blending color effects is desirable. Their use in theaters to maintain softly changing illumination in the lobby and foyer is rapidly growing in popularity.

There are essentially two distinct types of motor driven dimmer equipments — pushbutton control type, and continuously operating type.

The pushbutton control type is for the application requiring control from one or more remote points, as in salesrooms, some special theater installations, etc. A motor can be provided for each dimmer or for various groups of dimmers according to requirements of the effects desired. Each motor will then operate as many dimmers as are interlocked with it.

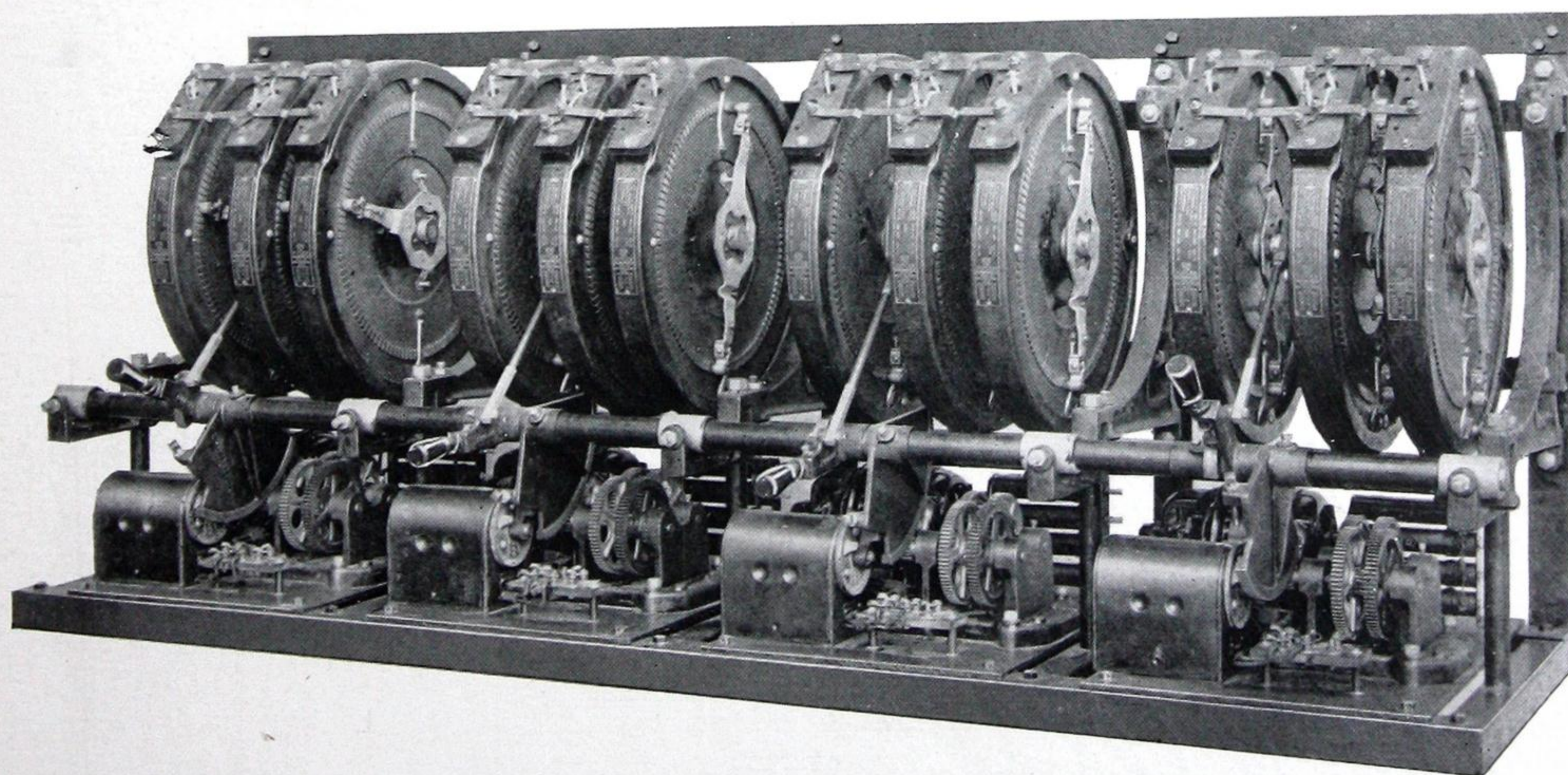
The dimmer plates with motor drive can be installed in any out-of-the-way location with one or more pushbutton control stations mounted at the points of operation. At a touch of a button, the

dimmers respond immediately, bringing the light to the pre-determined brilliancy to produce the desired color effect.

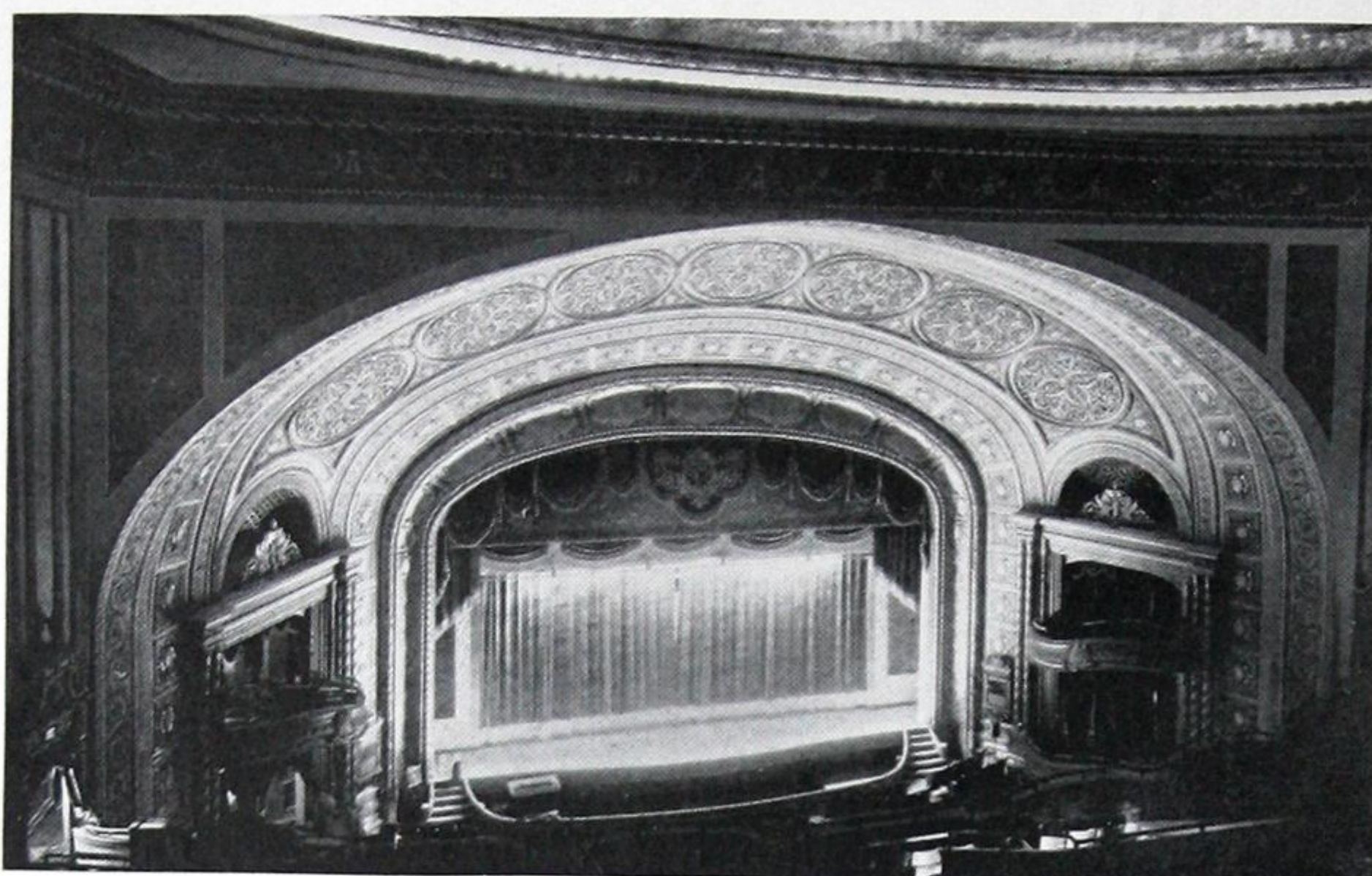
Individual and interlocking master control of the motors is provided as on manual dimmers. The several motors operating their respective dimmers can be operated simultaneously by the introduction of a master switch that will start or stop all motors simultaneously.

The continuously operating type is used in theater lobbies, hotel dining rooms, etc., where a continuously changing cycle is desired. Adjustable driving members make possible the pre-setting of any color arrangement desired and permit changes in the color cycle according to the requirements. The color sequence is created by simply starting the motor and the effect is repeated as long as the motor continues to operate.

Motor driven dimmers have the same characteristic features as are found in the standard C-H "Simplicity" plate-type dimmers. The mechanical driving mechanism is also of the usual C-H high-grade quality in material and workmanship.



Motor driven dimmers are comparatively small units and particularly suitable for lodge halls, hotels, salesrooms, lobby displays, in the foyer of a theater and in connection with various attention compelling devices. Standard circular plate "Simplicity" Dimmers are employed and operated by small motors controlled from conveniently located push buttons.



Typical group of theaters using C-H Dimmers

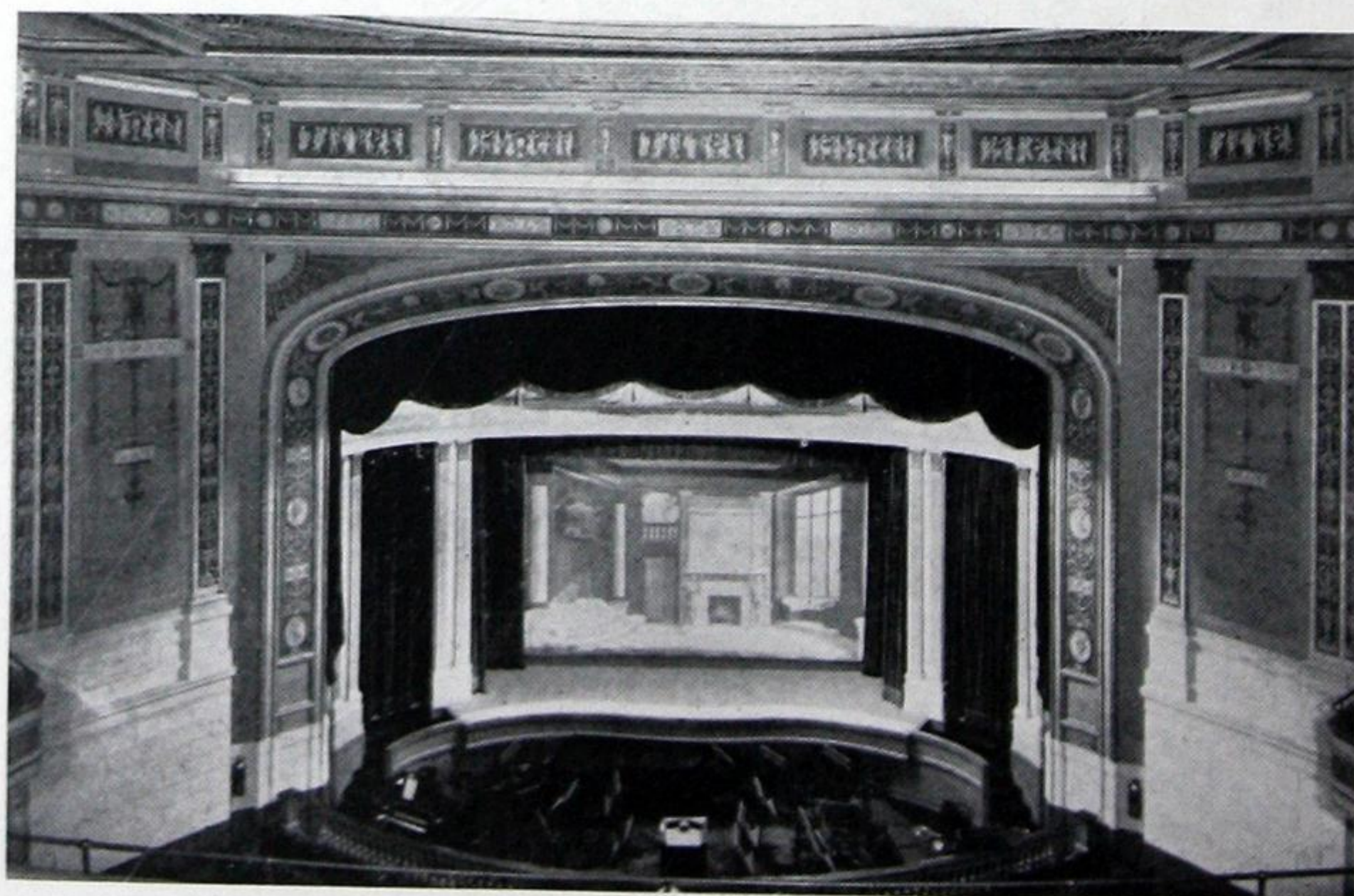
At the left is shown the stage arch of the New Palace Theater at South Bend, Indiana.

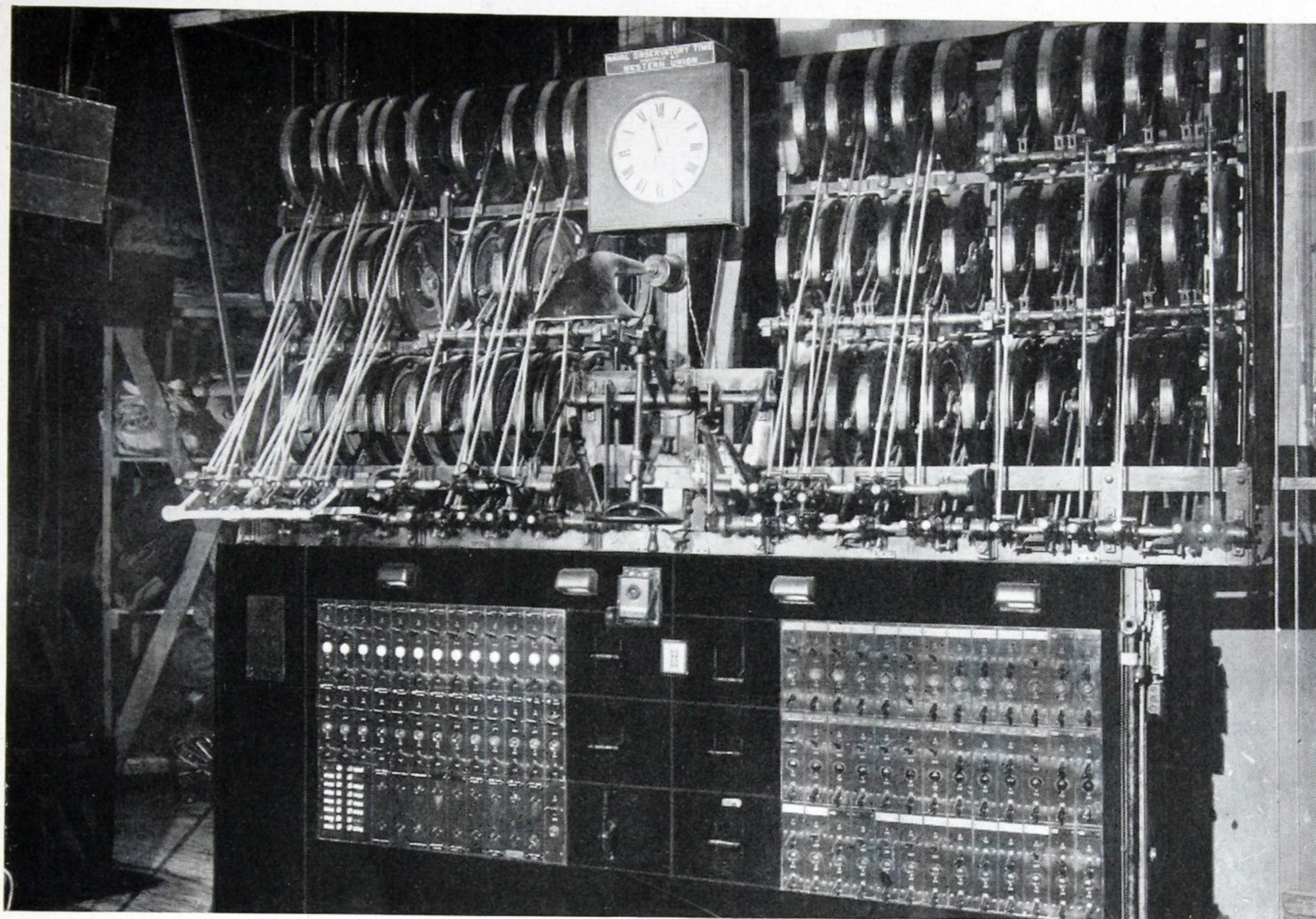
Graefer's Egyptian Theater, Portland, Oregon. One of the many smaller theaters that find Cutler-Hammer Dimmers profitable.



The Grand Theater, Keokuk, Iowa. Here, too, the Cutler-Hammer Dimmer equipment is playing an important part in increasing the attendance record.

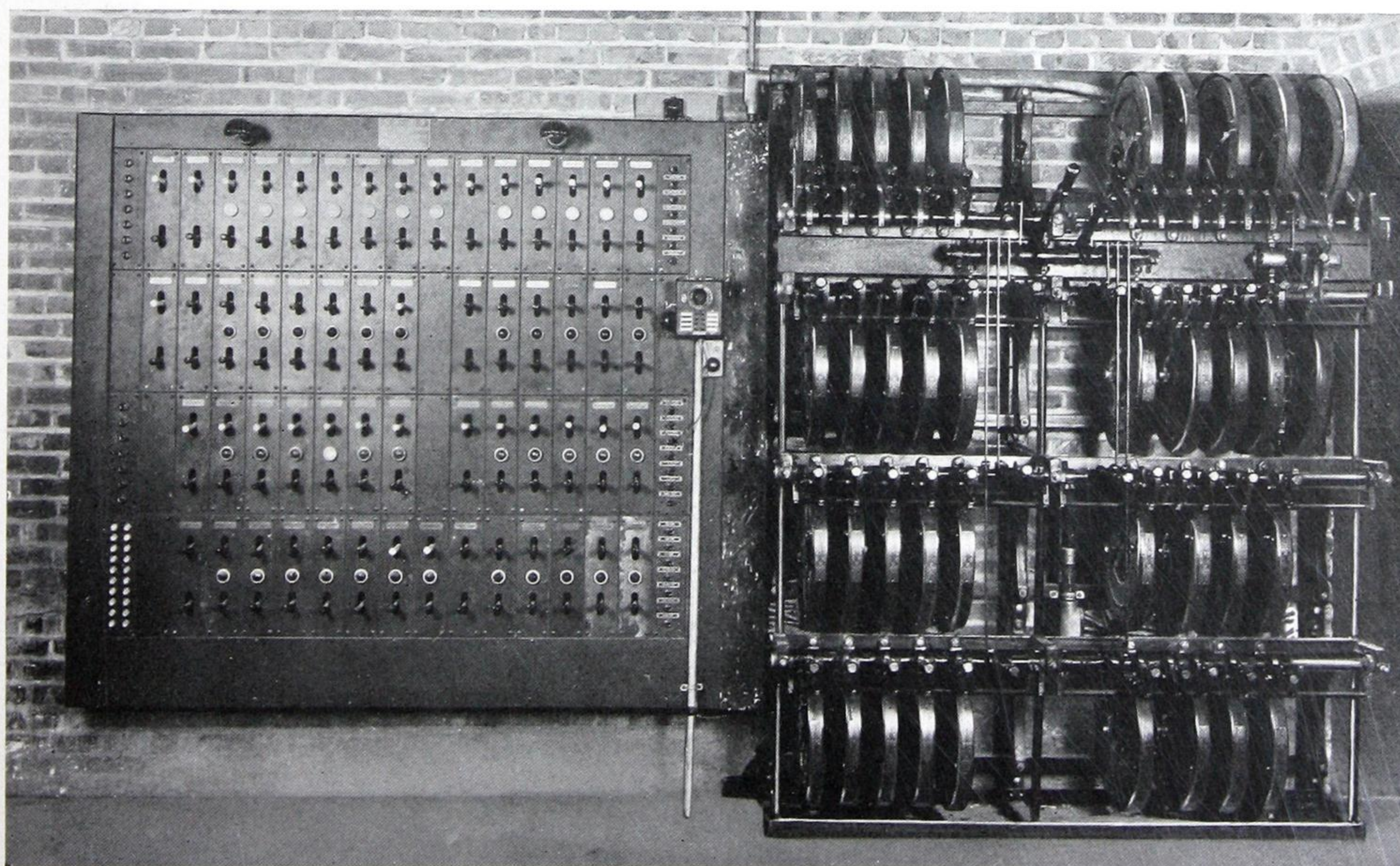
The National Theater, Richmond, (Mr. C. K. Howell Architect). The switchboard and dimmer installation is shown on page 10.

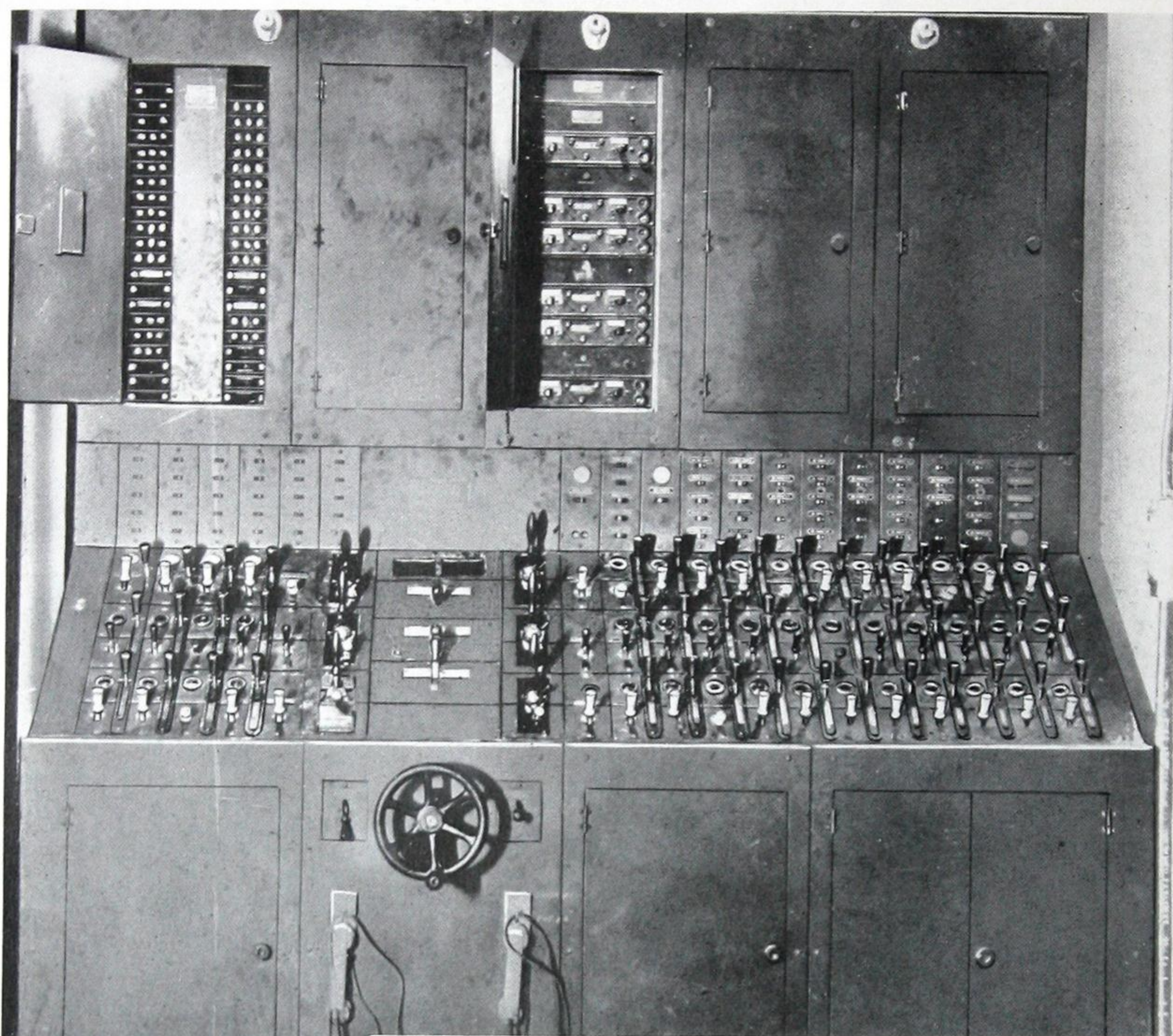




The view above shows the installation of Cutler-Hammer Dimmers which control the lighting in the famous old Hippodrome, New York City.

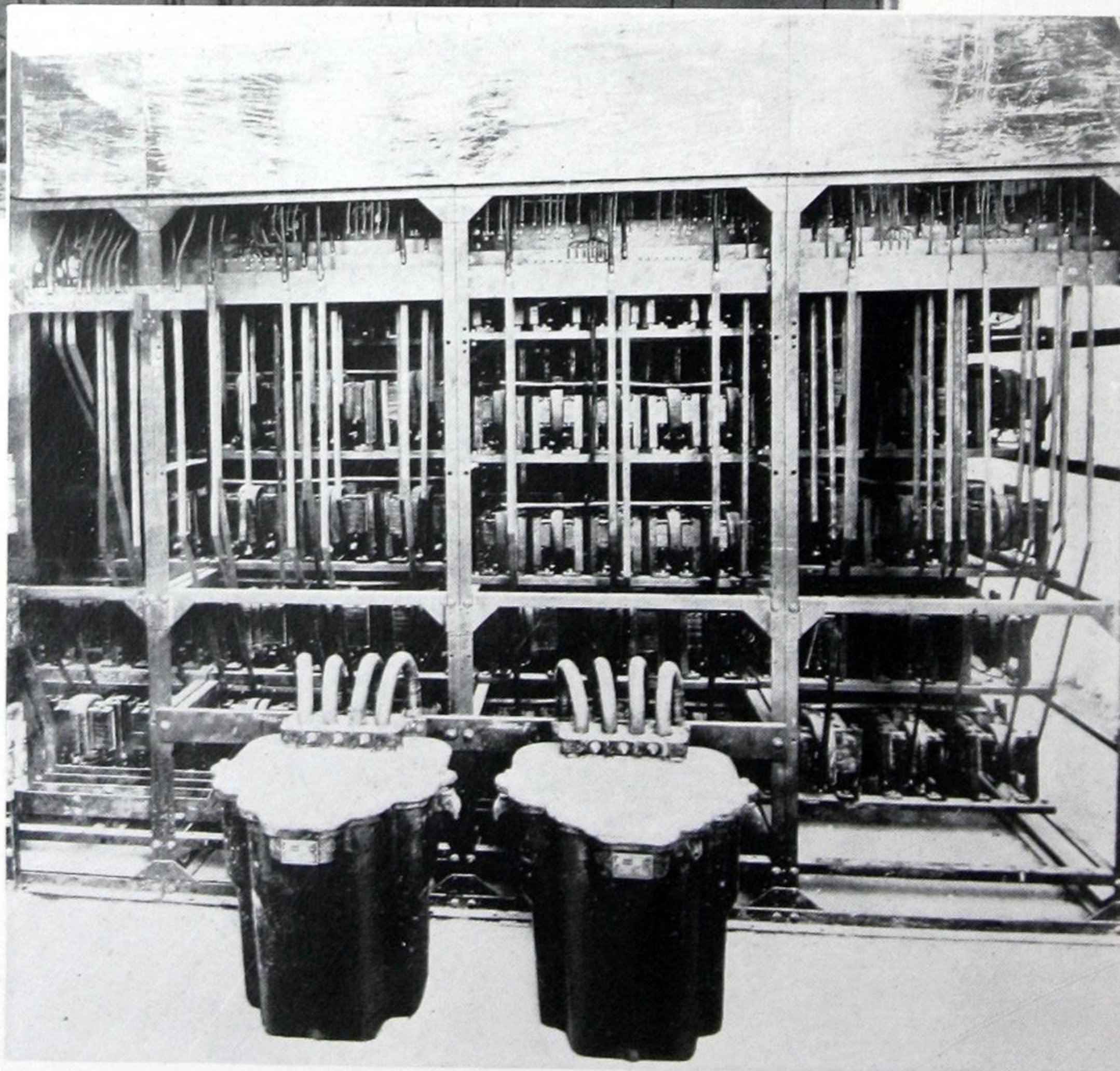
Below is a floor type C-H Dimmer bank without slow motion drive showing the usual arrangement of levers in rows according to color. The switchboard is a Major (F. A.).





Above is shown the control board for C-H Reactance type dimmers in the Scottish Rite Cathedral, St. Louis Mo.

A rear view of the dimmer bank showing the booster transformers used in this installation is at the left.



C-H Reactance Type Dimmers



HIS type of dimmer solves the illumination control problem for the large theater, where conveniently located space is at a premium. This is particularly true where the circuits are of large capacity, as in modern auditoriums, Masonic lodges, and large moving picture theaters.

Many modern installations require a number of dimmers with a capacity of 10 or 20 K. W. and sometimes greater capacities.

The Reactance type dimmer equipment is well fitted for installations of this character. Because of the compactness of its control board it affords convenience of control without sacrificing the very necessary smoothness of illumination control so necessary in modern dimmer practice.

This equipment consists essentially of two units; the Reactance dimmer or reactor, and the control plate.

In the reactor, the impedance of the light circuit is varied through the medium of flux created by a D. C. excited coil superimposed on the flux created by the A. C. load coil. This dims the lights or brightens them as desired. Only a small amount of direct current is required for excitation of the D. C. winding. This exciting current can easily be controlled from a distant point by means of a standard C-H "Simplicity" dimmer resistance plate. This resistance plate controls the current of the D. C. windings of the reactor. Since this current is only a very small per cent of the lamp load, only a few plates are required, thereby effecting a substantial saving in mounting space.

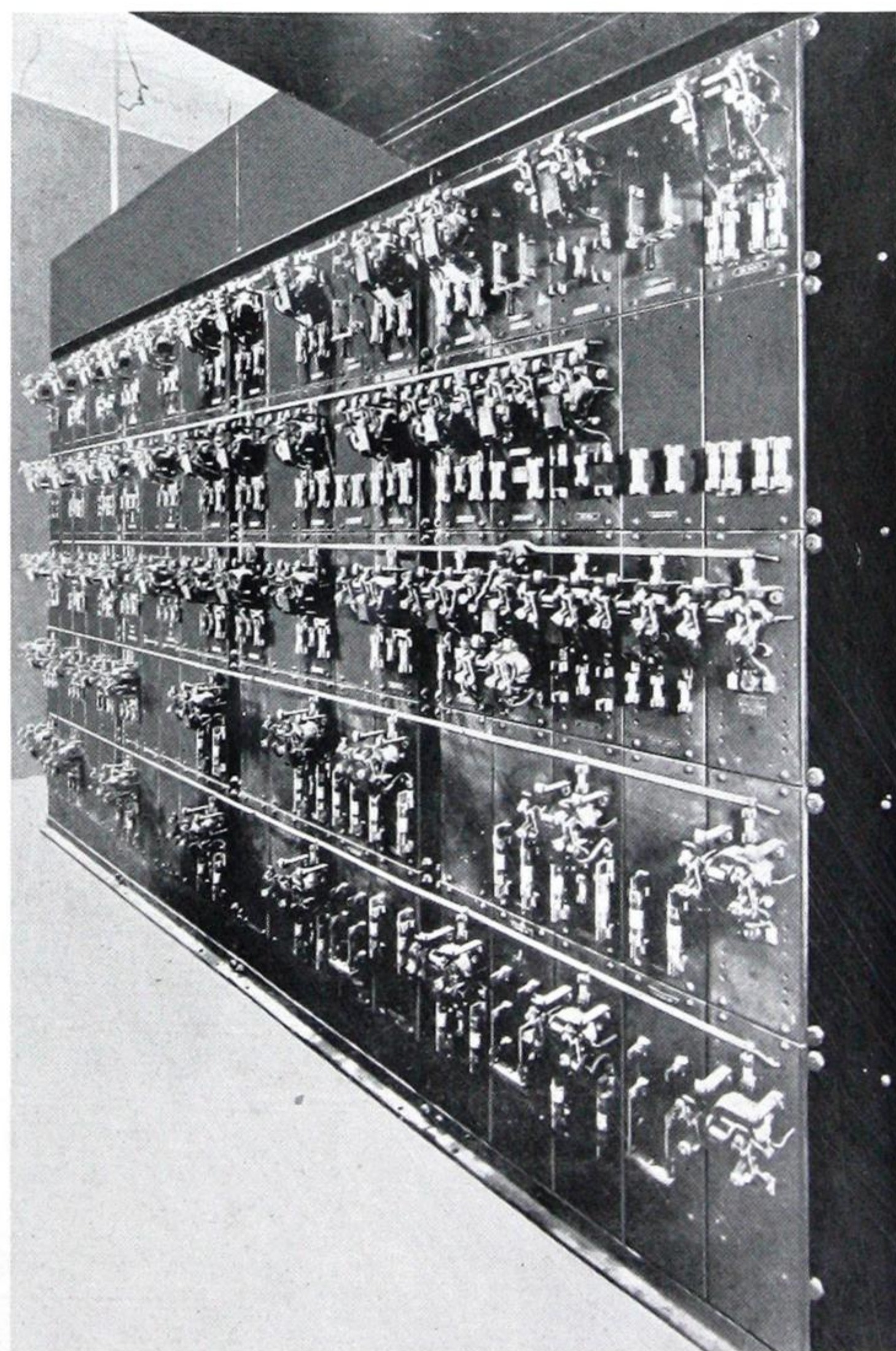
The reactor may be located in close proximity to the lighting load or in any other location where space is available. This removes the largest part of the dimmer installation from the stage and permits placing the dimmer in the basement or in any out-of-the-way location.

The only part of the Reactance dimmer equipment that is mounted at the point of control is the pilot board. This pilot board includes the D. C. controlling plates with individual levers, master

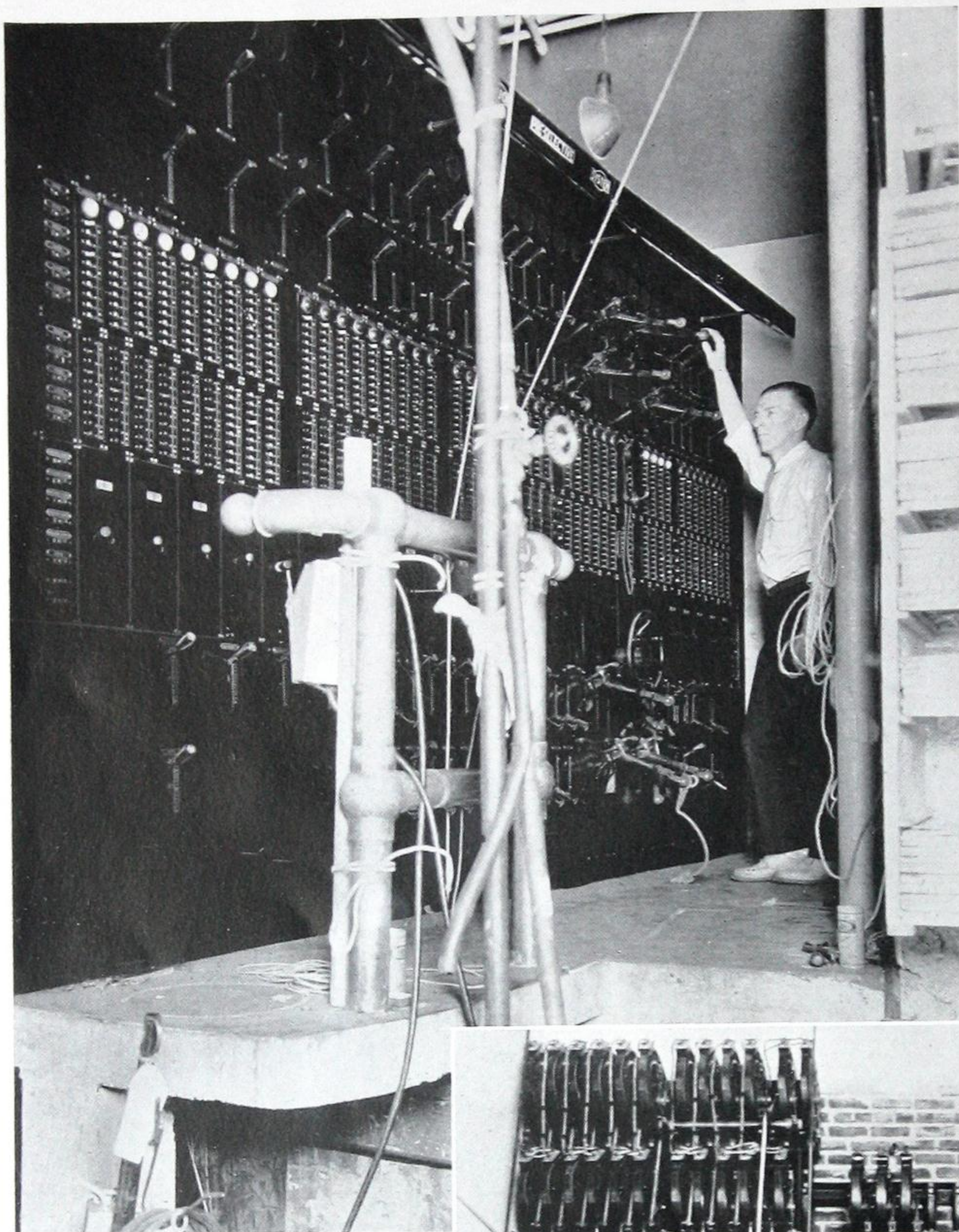
levers and slow-motion drive, and incorporates all of the flexibility provided by resistance type dimmers. It is a very small unit requiring only a small fraction of the space required by resistance type dimmers for controlling loads of equal capacity.

The equipment, therefore, not only meets the requirements of limited mounting space, but also provides the most convenient control by permitting the grouping of all control levers in the smallest possible space.

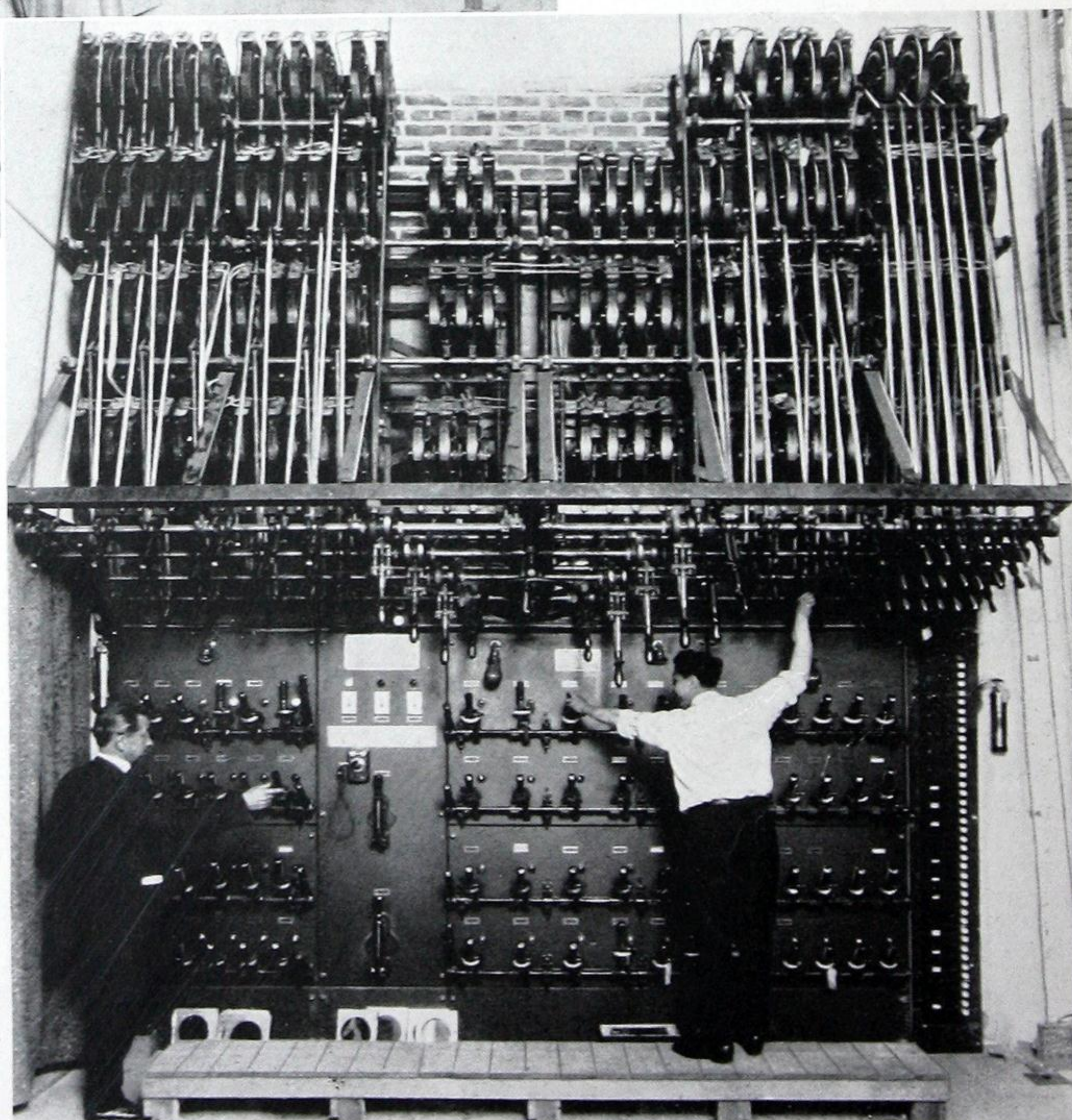
An excellent example of this type of installation is shown on the opposite page.



The remote control board used at the Scottish Rite Cathedral, St. Louis, Mo., in conjunction with the reactance type dimmer pictured on the opposite page. The C-H Magnetic Switches used are designed especially for this type of work.



Showing the dimmer control Major (F. A.) board in the Senate Theater, Chicago. The C-H "Simplicity" Dimmer levers and slow motion hand wheel are shown in front of the operator. The dimmers are installed behind the panel.



The applicability of C-H "Simplicity" Dimmers to unusual forms of installation is shown in this view taken at the Forum Theater, Los Angeles, Calif. Small lateral space is required by the installation and all the operating levers are within easy reach. (Mutual Board.)

THE CUTLER-HAMMER MFG. CO.

GENERAL OFFICES AND
WORKS
MILWAUKEE
P.O. BOX NO. 1564

ELECTRIC CONTROLLING DEVICES

NEW YORK WORKS
801 EAST 144TH STREET
NEW YORK

MILWAUKEE, WIS.

November 26, 1926

Mr. James D. Lee, Jr., Lighting Representative,
Public Service Electric & Gas Company,
418 Federal Street, Room #5,
Camden, New Jersey

Dear Mr. Lee:

The book which you requested, "Illumination Control for the Modern Theatre", is sent herewith. You will find it interesting from front to back cover. Every effort has been made to make it a real help to you.

You will find illustrations showing many theatres, both small and large, in which C-H "Simplicity" Dimmers are used, - also pictures of installations indicating the various ways of grouping, mounting and locating the dimmers to fit most any size and shape of available space. These installation views may help you to arrive at a means for locating dimmers in your theatre. In fact, there is so much of interest in this book that you will probably want to start on page 1 and read through.

Should you want additional information, we suggest that you get in touch with our nearest office. We have notified them of your interest, so they will be glad to serve you. They are located at 8 West 40th Street, New York, New York.

Yours very truly,
THE CUTLER-HAMMER MFG. CO.

T.D. Montgomery
T.D. Montgomery,
Manager of Industrial Sales.

THE CUTLER-HAMMER MFG. CO.

RECEIVED OFFICE AND
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MILWAUKEE, WIS.

January 20, 1920

Mr. James D. Lee, Jr., President
Public Service Electric & Light Co.
115 Federal Street, Room 1000
Camden, New Jersey

Dear Mr. Lee:

The book which you have ordered is now in the hands of the printer.

For the Modern Theatre, is a book which will be of great interest to you.

It is a book which is of great interest to you and which will be of great interest to you.

made to make it a real book.

You will find it of great interest.

both small and large, and which will be of great interest to you.

used, - also pictures of the theatre, and which will be of great interest to you.

ways of growing, and which will be of great interest to you.

most any place and which will be of great interest to you.

who have been in the theatre for many years and who will be of great interest to you.

directly in the theatre, and which will be of great interest to you.

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and which will be of great interest to you.

T. D. Montgomery,
Manager of Industrial Sales.

C-122

The advantages of remote control and pre-selection through C-H Magnetic Switches

MANY quick changes of scenes and lighting effects are sometimes required during a performance. This has led to the development of the pre-selection type of dimmer switchboard in which C-H Dimmers and Magnet Switches play a most important part.

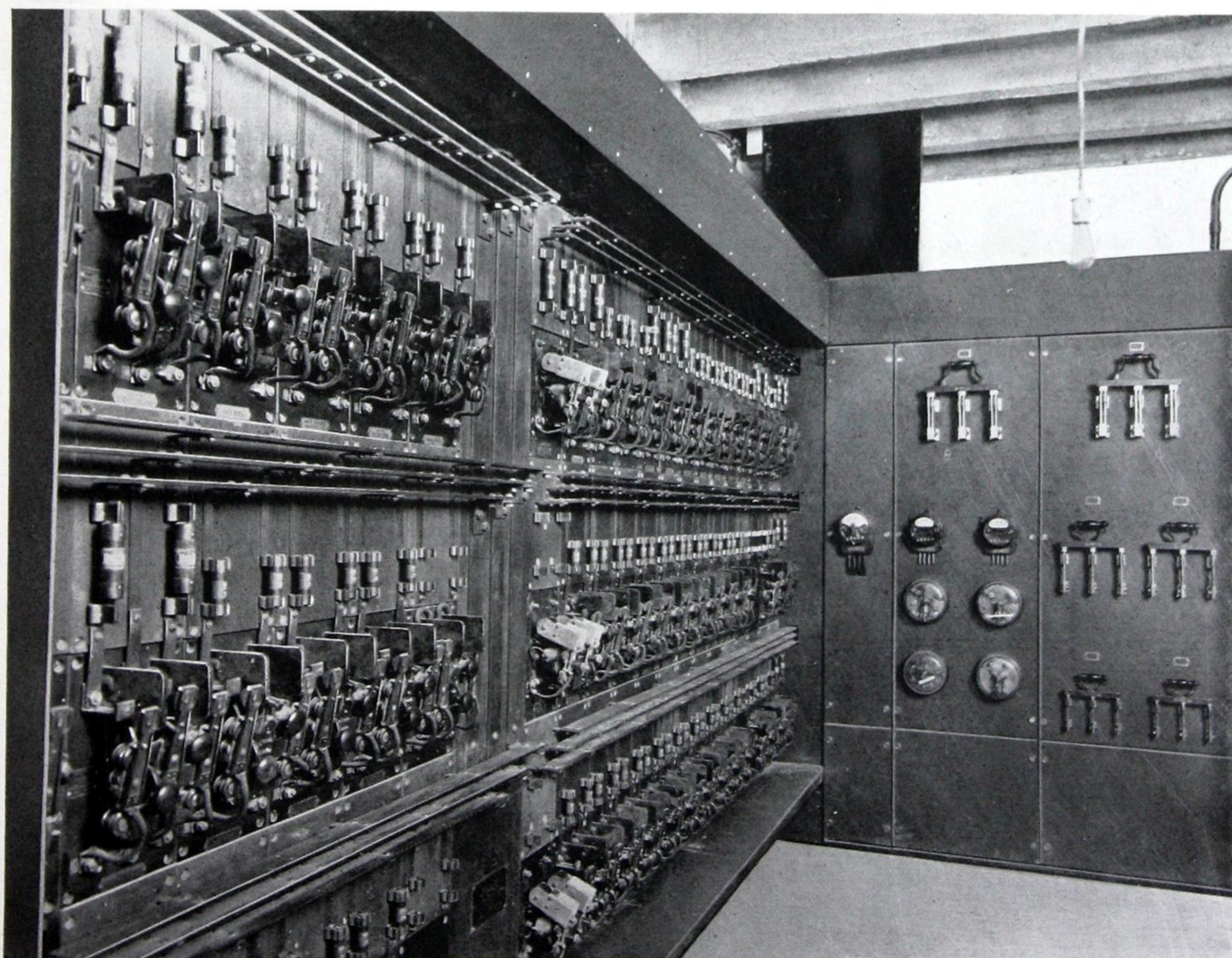
These switchboards enable one or more lighting effects to be definitely selected and "set-up" on the board in advance. These lighting effects are then available at any time at the touch of a button or lever.

The installation at the Uptown Theater, Chicago, is a splendid example of a pre-selection type dimmer switchboard. With this switchboard (built by Major - Frank Adam Co., who use C-H Dimmers and Magnet Switches) ten complete lighting scenes can be set up at one time and controlled entirely by one

man. The scenes may progress forward or backward or in any rotation. The operator is furnished a cue sheet which he follows to give the proper lighting effects, just as the orchestra leader follows his cue sheet to give the right music.

The Magnetic Switches are usually mounted on a switchboard located in the apparatus room in the basement as shown in the illustration below.

Where space limitations require that the dimming equipment be placed at some distance from the most convenient point of control, the installation may be most efficiently handled by the Reactance type dimmers already described. The reactors can then be located at some distant point, and operated from the point of control. In such an installation the remote control switch plays a vital part.



Showing the Major (F. A.) remote control board used in conjunction with C-H Dimmers. The C-H Magnetic Switches used are of special design, facilitating the remote control and pre-selection of various lighting scenes.

C-H "Simplicity" Dimmers in schools, lodge halls and office buildings



ILLUMINATION control as used in the successful theaters, is finding its way more and more into schools, lodge halls, office buildings, convention halls and auditoriums of every description.

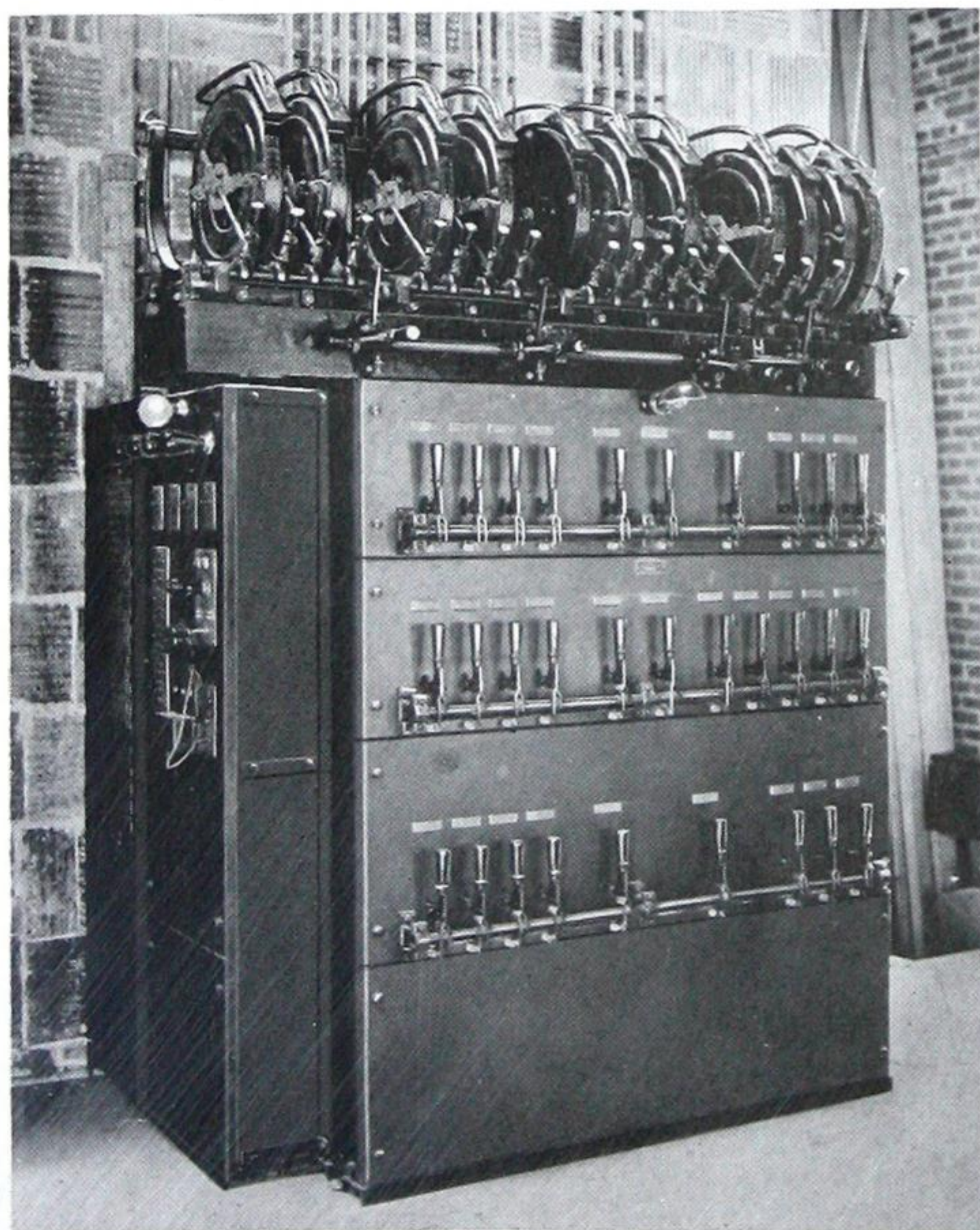
Controlling illumination so that lights are turned on or off gradually rather than a sudden snapping "off" and "on" is a sensible refinement. It is alone sufficient justification of dimmer applications in such places, to say nothing of the beautiful color combinations in lighting which are thus made possible.

In schools the C-H Dimmer banks permit the same illumination control for amateur theatricals and entertainments that is obtained in the professional houses.

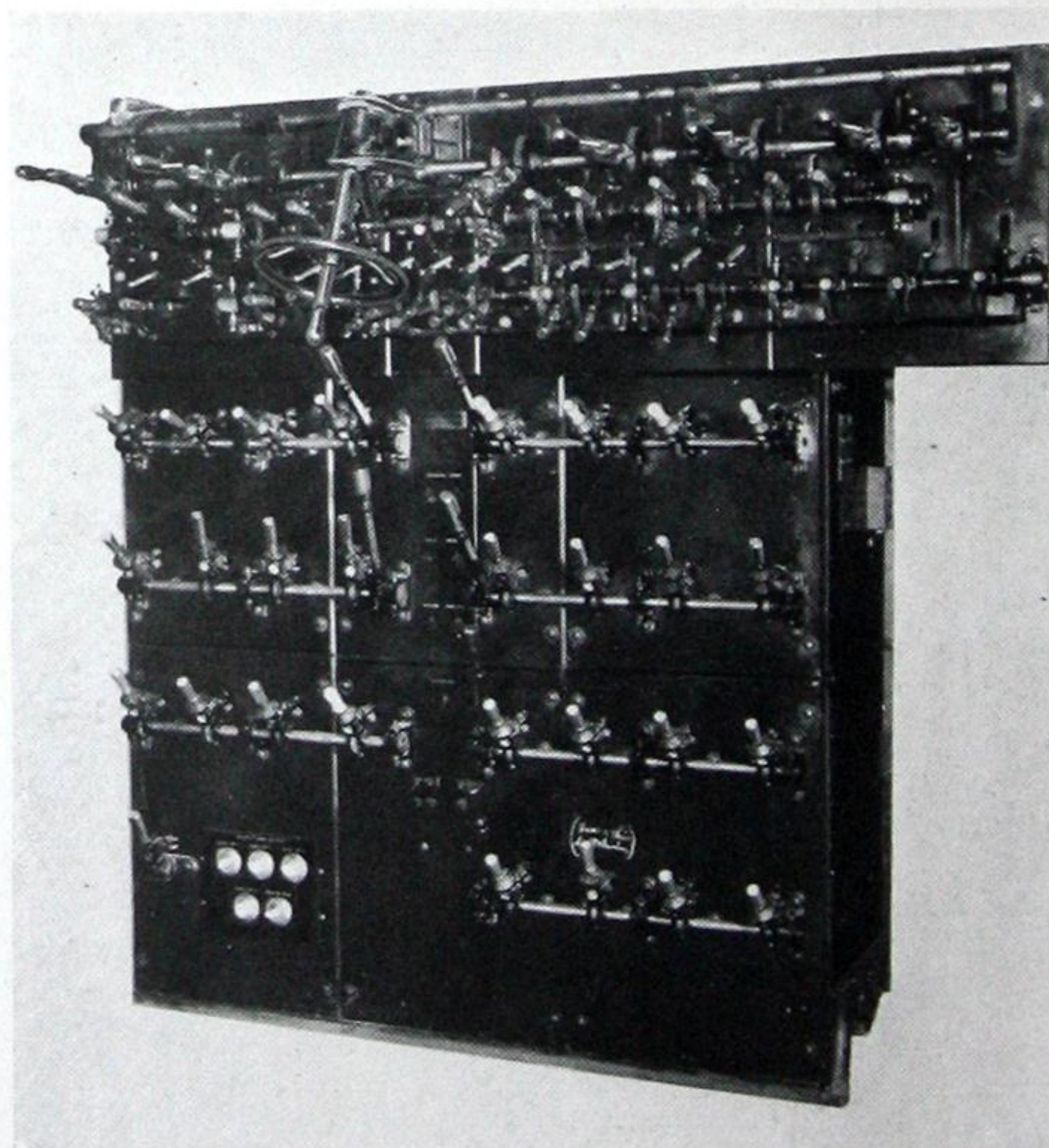
It goes far toward putting student entertainers in an enthusiastic and assured state of mind by creating a genuine and harmonious atmosphere. In musical institutions the close psychological relation between color and tone harmonies, now being more and more recognized, can be utilized to advantage both in training and entertainment.

In lodge halls especially, the softly blending color harmonies of light, made possible by C-H "Simplicity" Dimmers, serve splendidly to bear out the spirit of the meeting and emotion of the ritual.

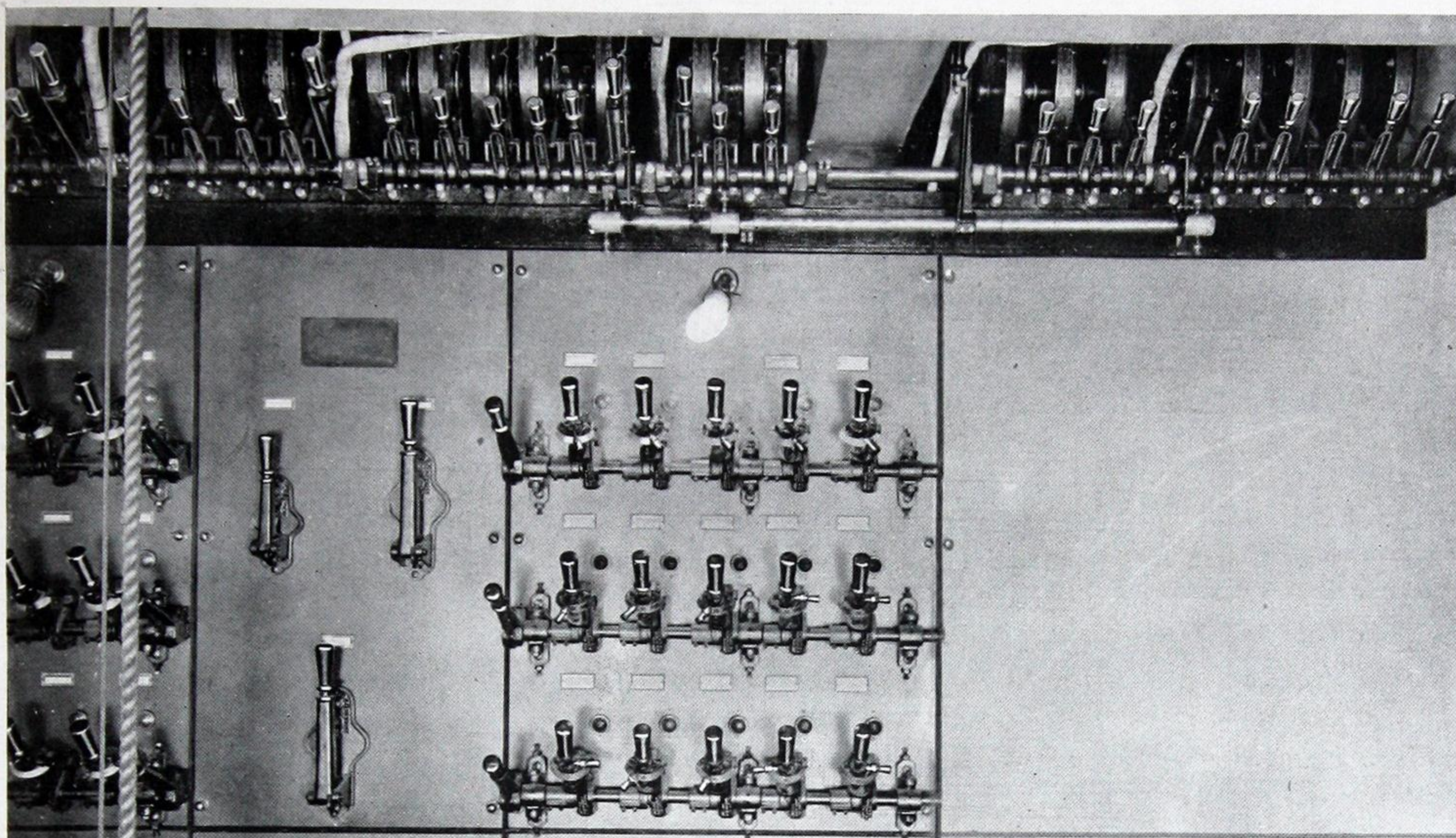
Dimming practice for the auditoriums and meeting halls of larger office buildings is also gaining rapidly in favor. Wherever it is used it lends soft pleasing dignity and richness to illumination.



A neat, attractive installation of C-H "Simplicity" Dimmers in the Practical Arts High School, Manchester, New Hampshire. Here the dimmers have been mounted above the switchboard which was built for the installation by the Worcester Electric & Manufacturing Co. of Worcester, Mass.



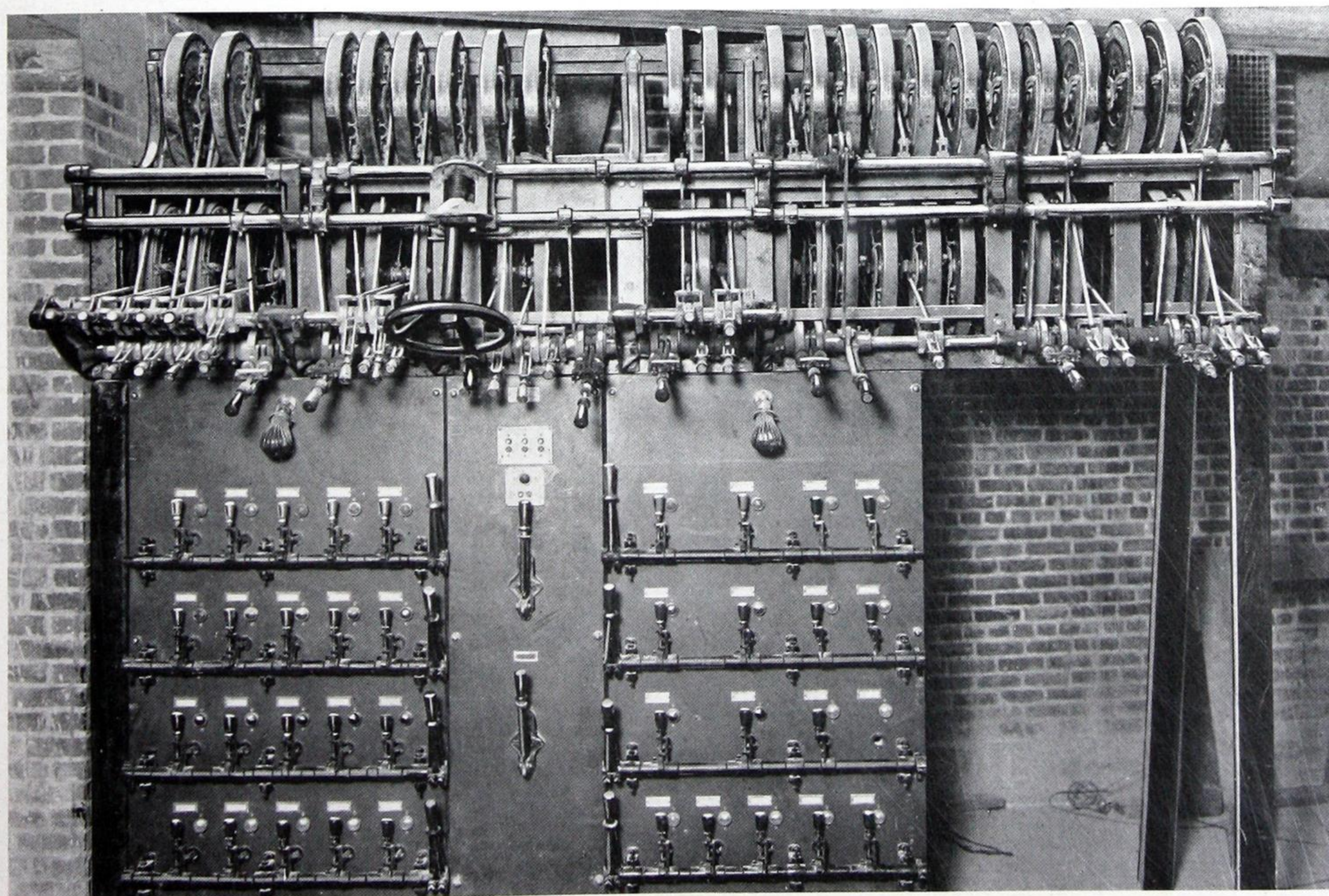
This installation of C-H "Simplicity" Dimmers at Kilbourne Hall of the Eastman School of Music, Rochester, N. Y., incorporates a slow motion hand wheel control as will be seen. The installation was made by the Wheeler Greene Electrical Supply Co.



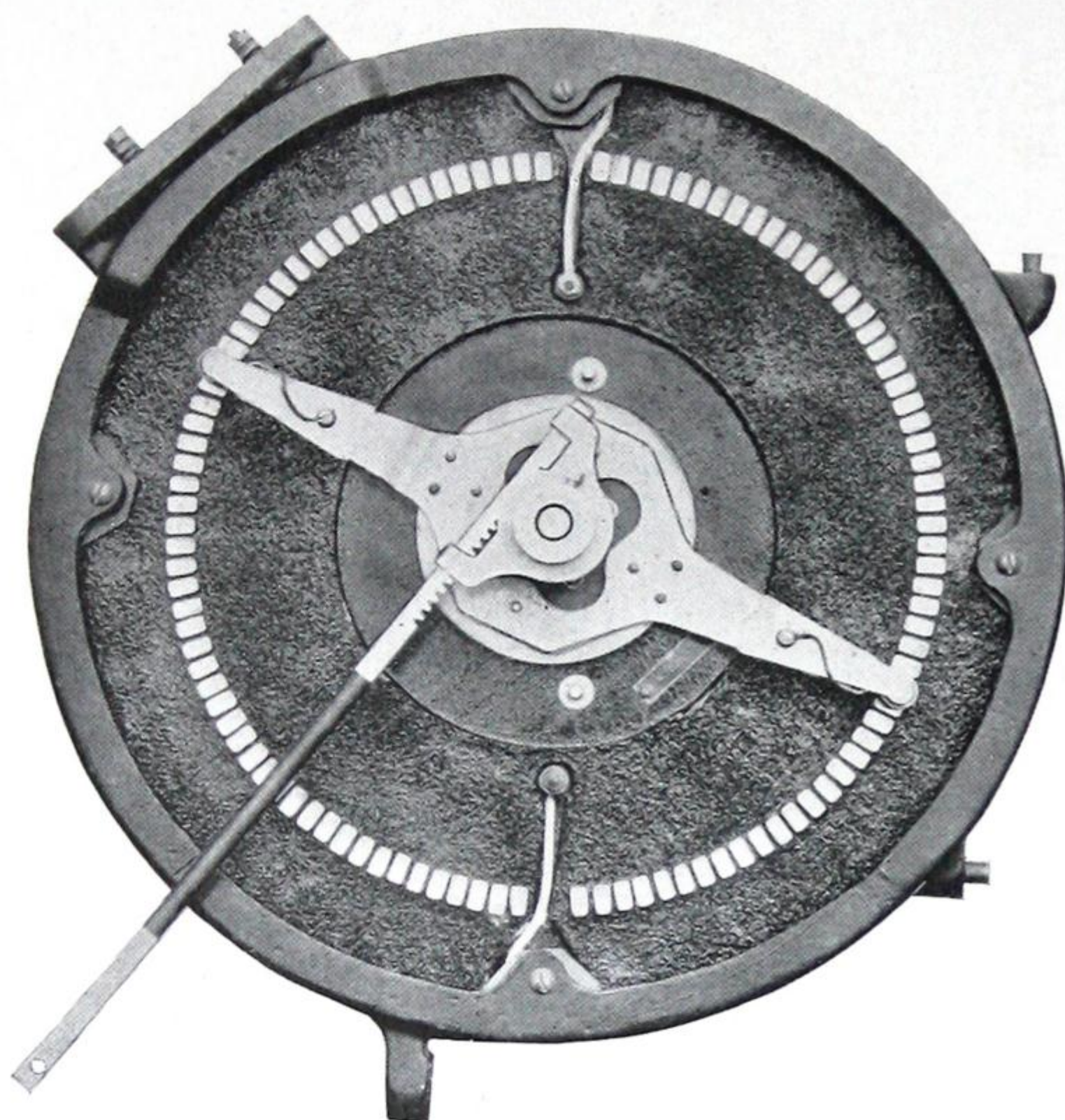
Theater dimmer installation for lighting control in lodge halls throughout the country are coming more and more into popularity. Above is an attractive installation of C-H "Simplicity" Dimmers in the Scottish Rite Lodge of the Masonic Temple, Pittsburgh, Pa.

Another installation of Cutler-Hammer dimmers, including the master slow motion wheel, is shown below. This controls the illumination in the Masonic Temple at Birmingham, Alabama.

Both of these boards were built by Mutual.



Design and construction features



The complete C-H "Simplicity" Dimmer Plate is compact, ruggedly constructed and of the greatest accuracy in every detail. The soapstone base is itself an insulator, with high heat absorbing qualities. Smooth, flickerless dimming is assured by the 110 steps provided.

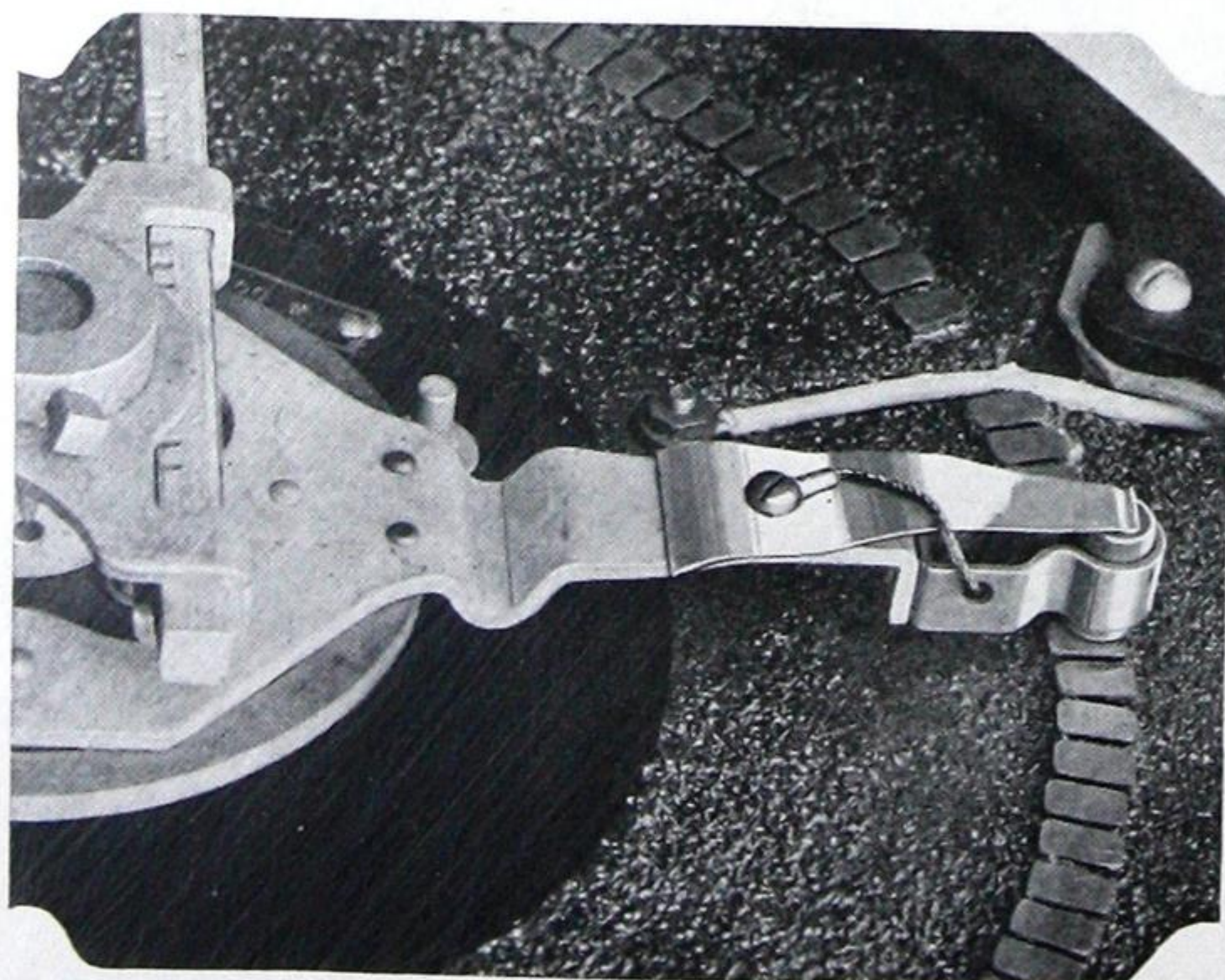


THE C-H "Simplicity" Dimmers are made for use on alternating or direct current. They consist of adjustable resistance or reactance devices, of the sliding contact type, attached to a soapstone base and mounted in a sturdy iron frame.

The capacities of standard C-H "Simplicity" units vary in lamp wattage from 300 to 3600 watts. Banks of any capacity are built. C-H "Simplicity" Dimmer plates are also supplied when necessary with a winding on both sides, making the capacity of each plate much higher.

C-H "Simplicity" Dimmers are made of non-combustible heat absorbing material. The temperature of issuing air is well within the limits of modern dimmer practice.

The dimmer plates are mounted with a four point suspension in a plate ring, which is bolted in place with a three point suspension in a strong iron frame. The same frame supports the operating lever shafts, which are provided with self-aligning or babbitted bearings. The frames are constructed in units so that they may be banked to obtain the most convenient control of operating levers and meet the mounting conditions most effectively.



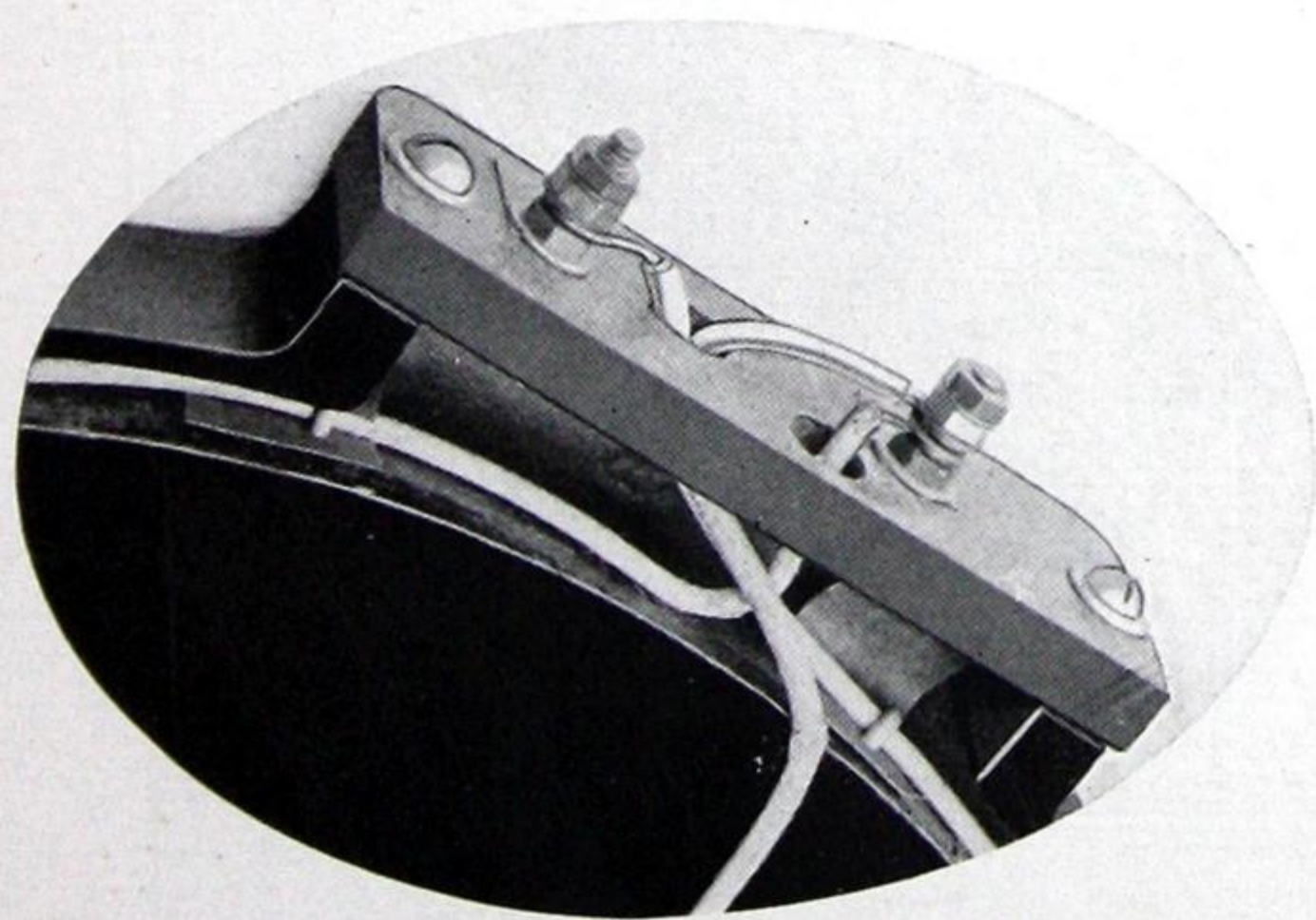
The stationary contacts are of polished brass which does not oxidize as does copper, thus reducing heat at the brush. These are imbedded in the heat absorbing soapstone base. The self-lubricating Cophite shoe (a copper and graphite combination) slides with little friction over these contacts. Heat can only be conducted to the spring through the cophite shoe, which is comparatively long; also a poor conductor of heat. Pigtails are connected to brush and contact lever without solder. Thus the operation of the dimmer is unaffected by temperature changes at the brush.

The contacts are spaced with the utmost accuracy so that no overlapping is possible. Smooth, flickerless dimming is the invariable result.

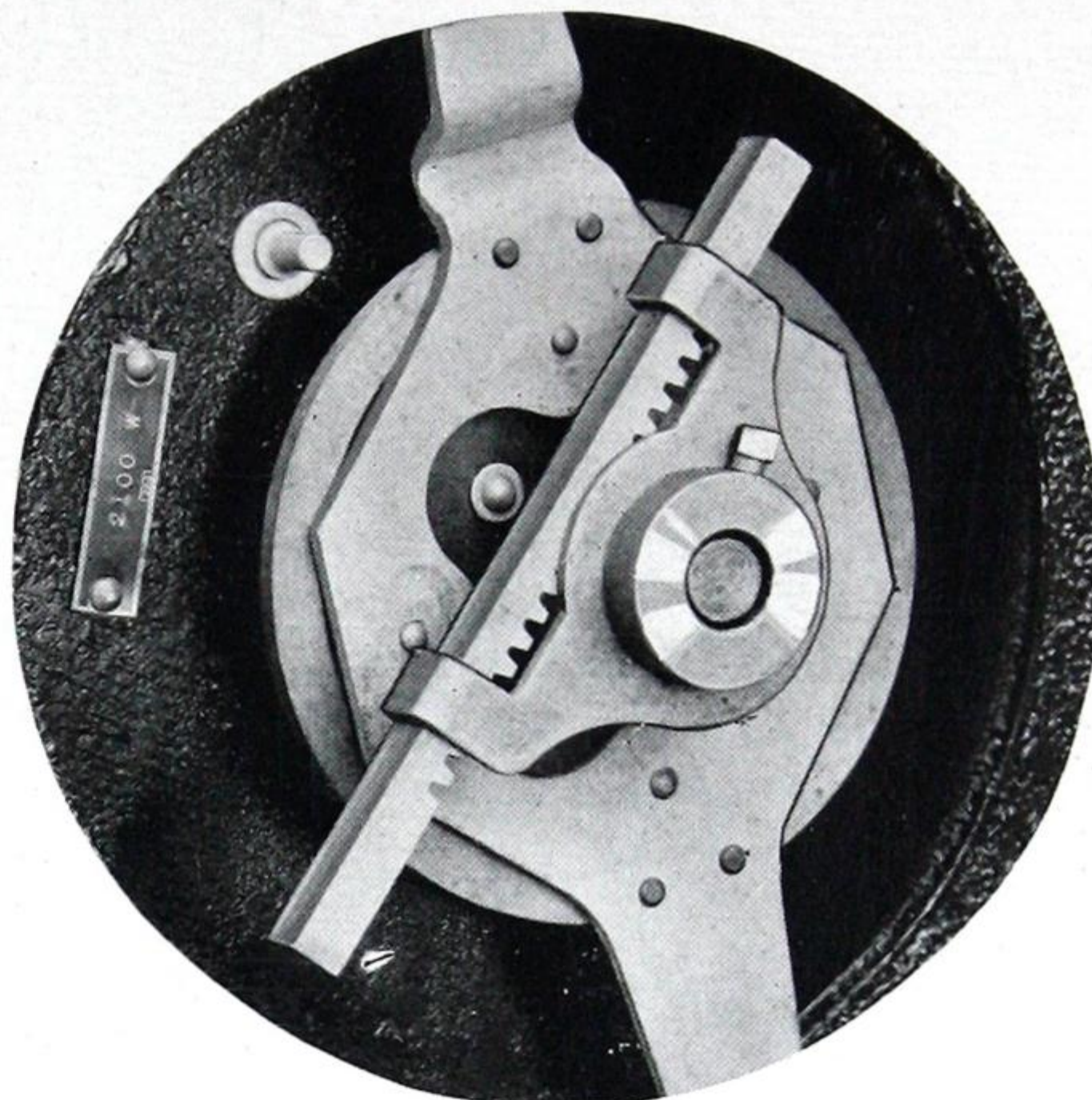
of C-H "Simplicity" Dimmer Plates

The fundamental advantages which make C-H "Simplicity" Theater Dimmers superior and which have brought them into universal use may be briefly summarized as follows:

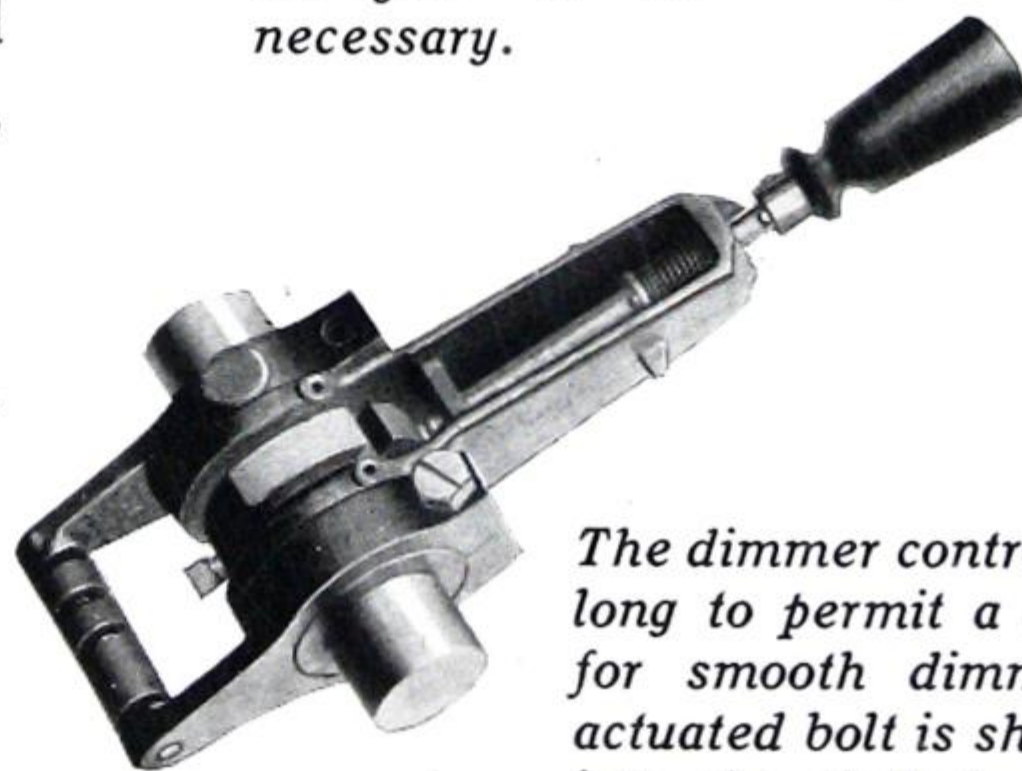
1. Absolutely flickerless control — eliminating spotty lighting, because there is no overlapping of contacts.
2. No "play" or back lash is present because of the simple direct rack and pinion drive used.
3. Dim modern lamps "black out"—110 steps from full brilliancy to "black out."
4. Designed for continuous duty and severe service.
5. Do not overheat or burn out, because the soap-stone bases have high heat absorbing and insulating qualities.
6. Use Cophite self-lubricating, long-life contact brushes.
7. Terminals are mounted on solid block of insulation, increasing electrical clearance to ground many times.
8. All current carrying parts perfectly insulated from operating levers, rack rods, pinions, frame, etc.
9. Compact and rugged — easily banked.
10. May be grouped to provide every known combination of dimming and color control.



The terminals of C-H "Simplicity" Dimmer Plates are mounted on a solid block of insulation which increases the electrical clearance to ground many times over ordinary construction. The terminals furthermore are easily accessible.



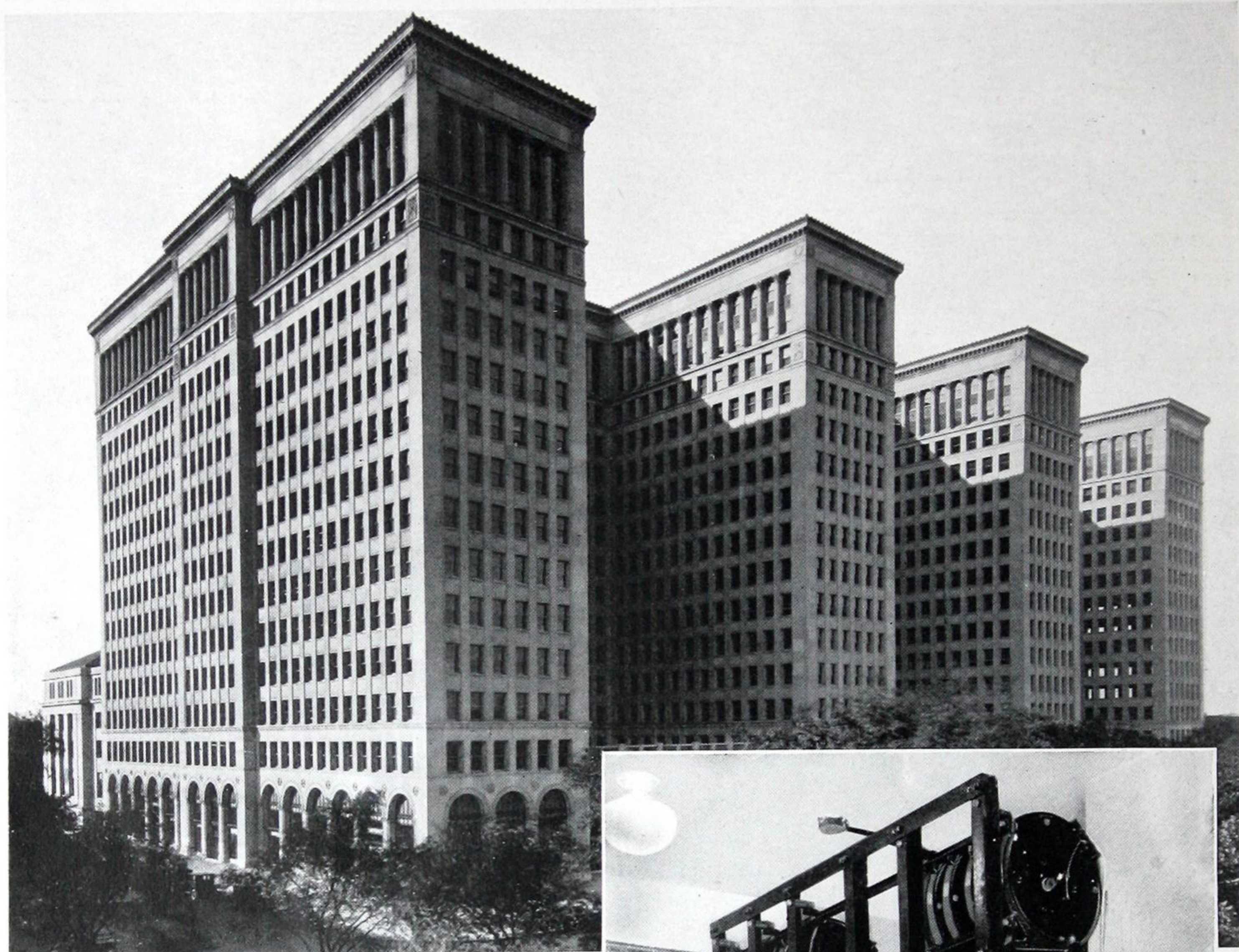
The rack and pinion drive, employed in the operation of C-H "Simplicity" Dimmers, is direct and positive, eliminating the play and back lash present in other forms of drive. The force required for operation is so slight that lubrication of the gear is not necessary.



The dimmer control lever is sufficiently long to permit a slow, steady motion for smooth dimming. The spring-actuated bolt is shown. When it slides into the slotted cam on the shaft it throws the dimmer plate into interlock.

Circuit indicating labels

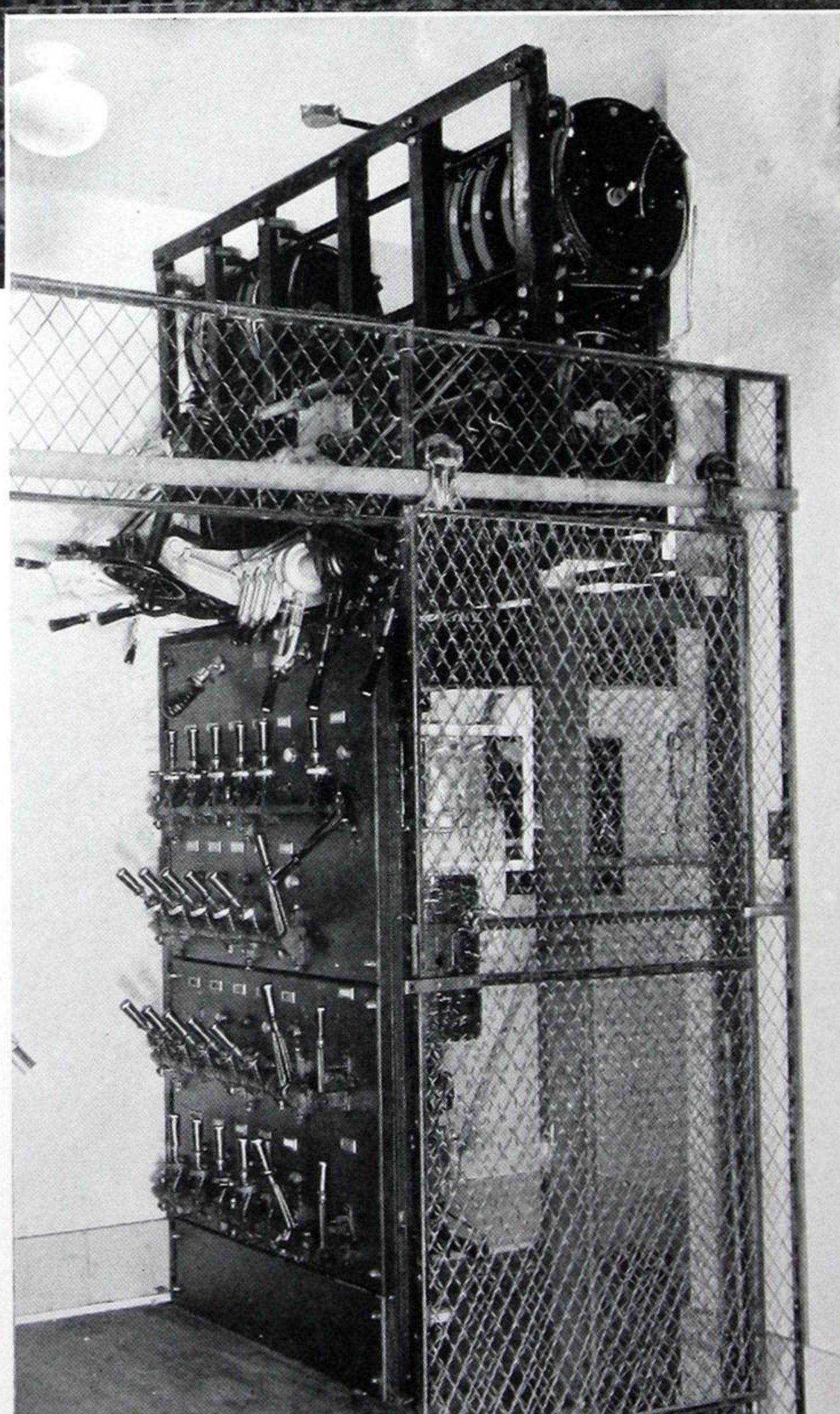
When desired, brass label tags indicating the circuit controlled by each lever are furnished. These tags consist of discs of enamelled brass to be attached to the ends of operating levers. The color of the disc and the letters and numbers stamped on it indicate, at a glance, the circuit controlled by the lever. If indicating labels are desired the designation of the current controlled by each lever should be given when ordering dimmers.



The largest office building in the world, the General Motors Building of Detroit.

This building is typical of many of the finer office buildings of the country which have adopted theater dimmers for control of the lighting effects in their auditoriums, convention halls, etc.

The installation of C-H "Simplicity" Theater Dimmers which control the lighting in the auditorium of the General Motors building is shown at the right.

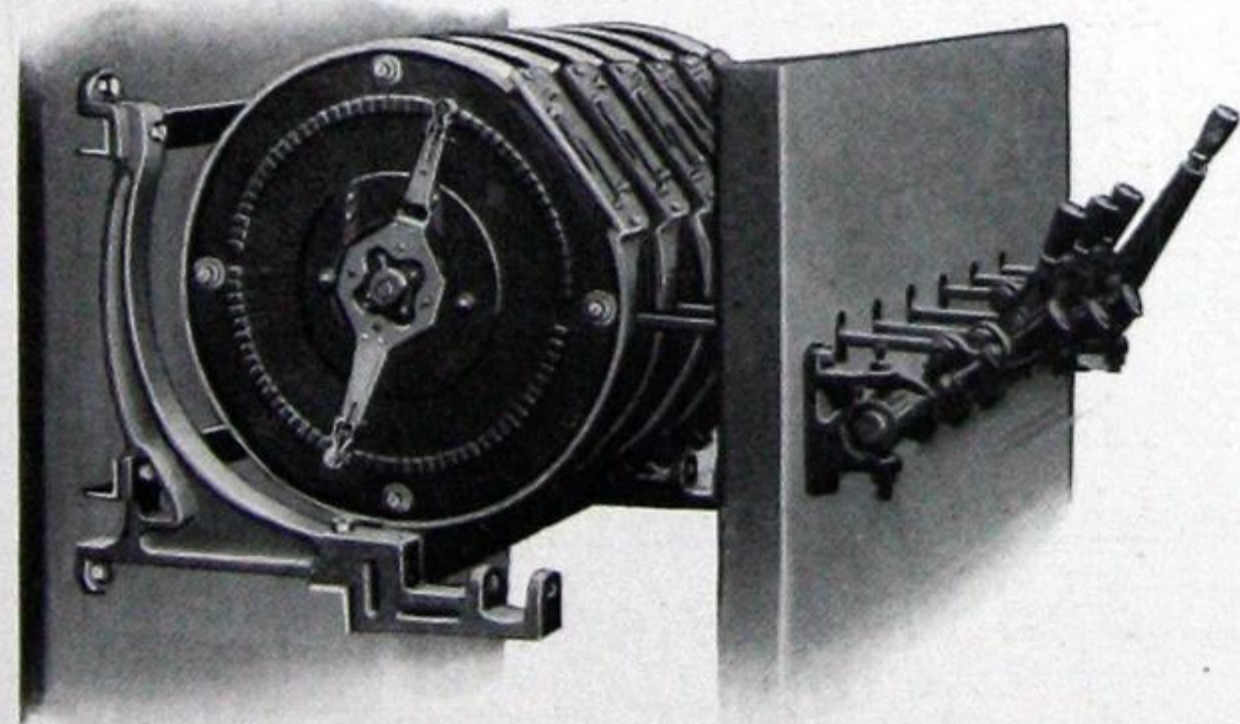


Installation of C-H "Simplicity" Dimmers

EACH Cutler-Hammer "Simplicity" dimmer plate is a complete self-contained piece of apparatus. It can be removed or replaced easily and can be operated alone or in connection with others by means of individual or master levers, respectively. Few plates, or many, may be installed at a time, according to requirements. Substantially banked in a rigid iron frame they may be placed in one or more rows to permit the grouping of individual dimmer operating levers into color sections horizontally and vertically according to circuits. For instance — the dimmers controlling all of the border lights will be placed in one vertical group, all of those controlling the foot lights in another vertical group, etc., while all the red lights will be placed in a horizontal row, the white lights in another horizontal row and so on to facilitate interlocking control throughout.

"Simplicity" plates are compactly built to conserve space. Four of them, sufficient for a house using not more than a total lamp load of 14,400 watts being easily installed in a space about 20 inches each way, less than would be covered by a single page of a daily paper.

The fact that C-H "Simplicity" plates can be furnished up to certain capacities with resistance windings on both sides, due to the high heat absorbing qualities of the soapstone base, is a further space conserving feature found only in C-H Dimmers.

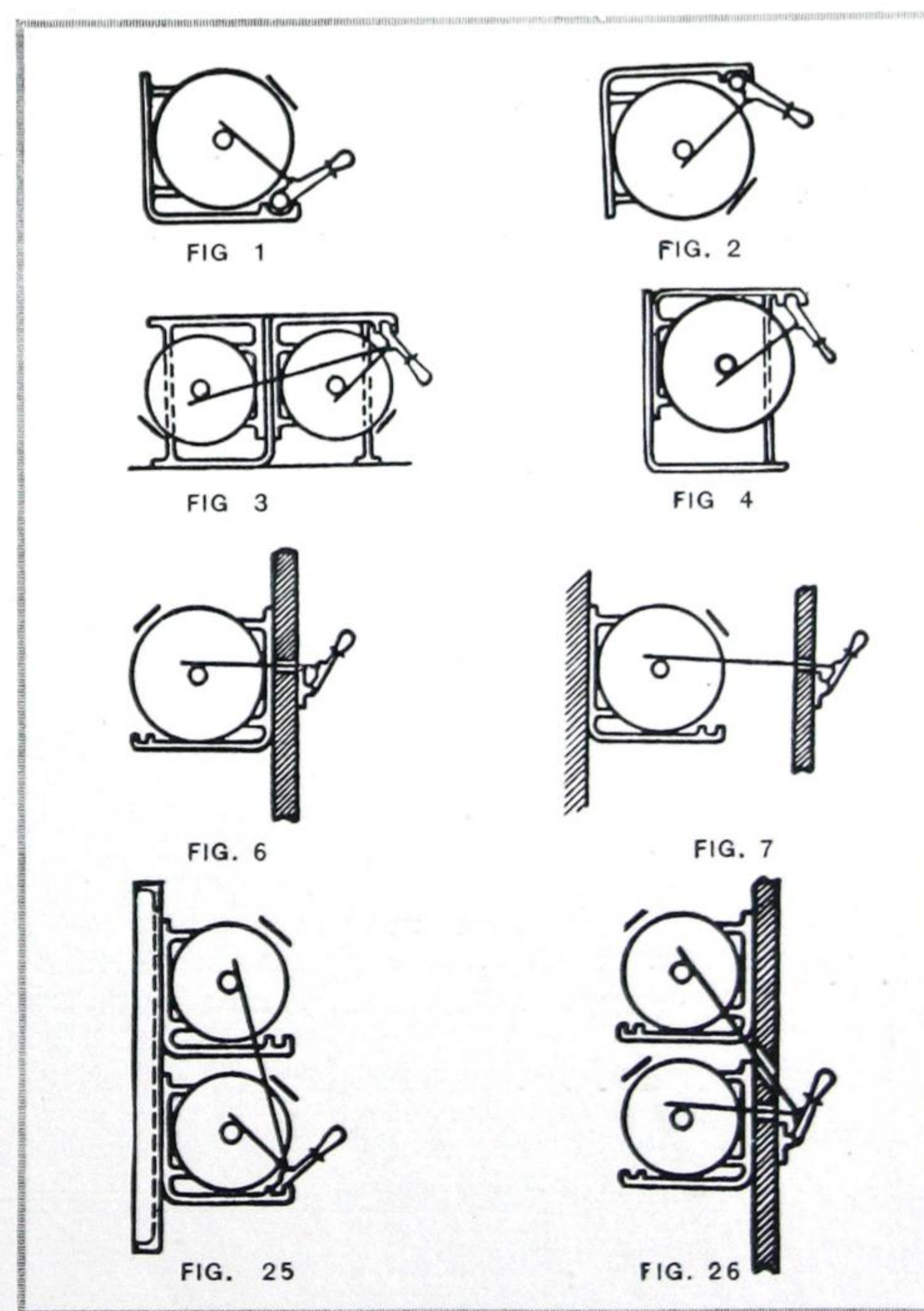


Illustrating the ease with which C-H "Simplicity" Dimmers may be used in connection with dead front switchboards. This is known as Fig. 7 construction — see opposite.

The plates used in dimmer equipment may be arranged with the operating levers assembled either above the plates or below them. In many installations the plates are located behind or away from the switchboard. The methods of mounting vary, but those usually employed are shown in the "thumb-nail" sketches below.

Provision for control of portable spots, pockets, etc.

Present day practise makes use of a great number of flood lights or direct lighting units. The problem thus introduced, of anticipating a variable load on the pocket dimmer circuits may be adequately handled



The standard methods of installing C-H "Simplicity" Dimmers are shown above. In specifying a particular style of mounting it should be referred to by the numbers given.



by suitable installation of Cutler-Hammer "Simplicity" plates. The almost universal application of the 1000-watt and 500-watt "C" spot and flood light lamps to the use of portable stage lighting equipment enables the placing of each incandescent pocket receptacle on a dimmer with the layout so arranged that there are 1000-watt and 500-watt sections on both the prompt and off-prompt sides of the stage with markings on the pocket covers designating the dimmer capacity of each receptacle in the pocket. By the application of the Cutler-Hammer double side two lever dimmer plate, which requires practically only the same space as a single dimmer, the arrangement can be given further flexibility to meet the varying loads encountered. With this arrangement and the advantage of the fact that a lamp not fully blacked out will not give sufficient illumination to cast shadows

(thus the lamp for all intents and purposes might be entirely extinguished) it is possible to design a dimmer bank flexible enough for the most exacting operating requirements even though the pocket load may vary considerably.

The following table shows the illumination at partial loads:

Lamp Load in Per Cent of Dimmer Rating	Candle Power Vacuum Lamps	Candle Power Gas Filled Lamp
60%	1%	0%
40%	2%	1%
20%	3%	3%
10%	10%	13%
5%	35%	42%

Typical specifications for the architect

1. Where indicated on the plans, there shall be installed a bank of "Simplicity" interlocking plate type dimmers.
2. The dimmer plates shall be substantially banked in a rigid iron frame. They shall be properly grouped in one or more rows in the same frame to permit the grouping of the individual dimmer operating levers in color sections.
3. A master control handle shall be provided for each group of color dimmer operating handles. A grand master control handle shall be supplied for the control of all stage dimmers. The dimmers for the house circuits shall be mounted in the same frame with the stage dimmers and shall be provided with a master lever. (In place of the grand master control handle of the stage dimmers, there should be provided a slow motion cross interlocking hand wheel control.)
4. The dimmer plates shall be of fire-proof material suitable for continuous operation at rated load, without undue heating or deterioration.
5. Each dimmer shall have sufficient resistance to dim the rated load of either gas filled or vacuum lamps, "black out," and shall provide a smooth, flickerless control throughout the entire dimming range from "full-bright" to "black-out."
6. The contact brushes shall be of suitable material and design to operate without objectionable noise and without the necessity of lubrication.
7. The dimmer banks shall be so constructed and mounted to bring the operating handles within easy operating reach of the operator. The dimmer terminals shall be readily accessible for wiring and shall be supported at least one-half inch from any grounded metal.

Information required when ordering

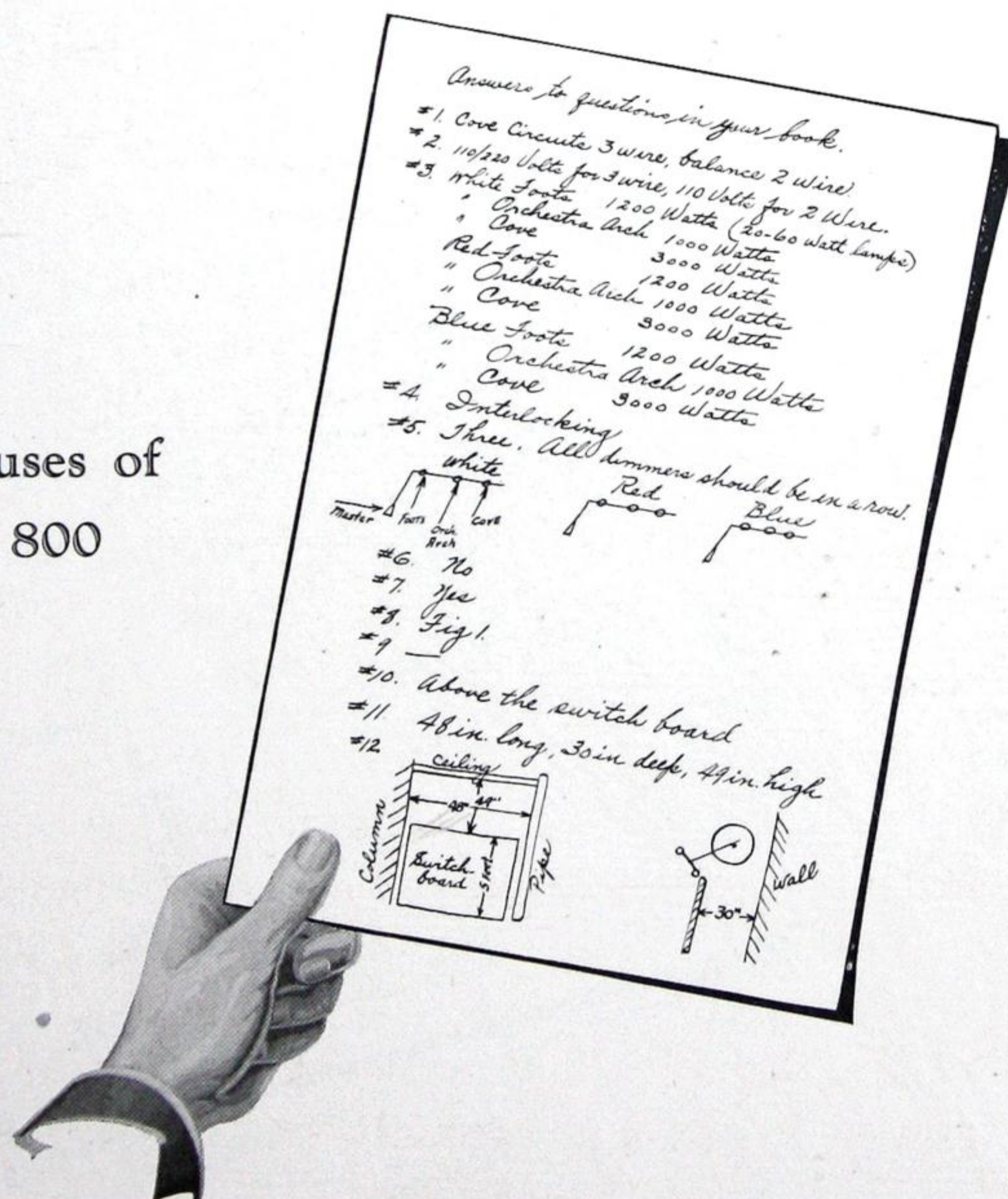
BEFORE we can quote price or fill orders it is necessary that the following questions be answered. To assist in determining the kind of answers required we show, on pages 27, 28 and 29 reproductions of some we have received. These have been picked to show typical specifications for a small, medium and large house.

- (1) Will dimmer circuits be 2 wire or 3 wire?
- (2) What is the voltage?
- (3) Give number of lamps and wattage of each or total wattage of all lamps to be controlled by each dimmer. Tabulate in the order in which you prefer to have the handles mounted, from left to right when facing same.
- (4) Do you want operating levers to be interlocking or non-interlocking?
- (5) If interlocking levers are desired, do you want more than one master lever? If so, state how

many, and send rough sketch showing groups of dimmers to be controlled by each.

- (6) In addition to the master levers do you want slow wheel drive as illustrated on page 11?
- (7) Do you want operating levers equipped with circuit indicating labels as described on page 23?
- (8) Give construction desired, referring to figure number of illustration as given on page 25.
- (9) If figure six or twenty-six construction, advise if steel front is desired.
- (10) Where is dimmer to be mounted, in relation to switchboard?
- (11) What are dimensions of available space for mounting the dimmer?
- (12) Make rough sketch giving dimensions of switchboard and dimensions of space in which dimmer is to be mounted.

For houses of
500 to 800
seats.



These are typical specifications for a house with a seating capacity of 600. Given the same information, C-H engineers can successfully design just the right type of dimmer installation. The dimmer furnished according to these specifications would also be suitable for houses with seating capacities of from 500 to 800. This dimmer bank would require a space of about 44 inches long, 22 inches high and 22 inches deep.

Typical specifications as received

#1. Will dimmer circuits be 2 wire or 3 wire?
Main service to the switchboard is 3 Wire. The service will be divided at the switchboard and the dimmers can all be designed for 2 Wire connections

#2. What is the voltage?
110 Volts

#3. Give number of lamps and wattage of each or total wattage of all lamps to be controlled by each dimmer. Tabulate in the order in which you prefer to have the handles mounted, from left to right when facing stage.

Wattage	Number of Lamps	Total Wattage
4000	1	4000
3600	1	3600
3600	1	3600
3600	1	3600
1000	1	1000
1000	1	1000
4000	1	4000
2400	1	2400
2400	1	2400
2400	1	2400
1000	1	1000
1000	1	1000
7200	1	7200
6600	1	6600
3600	1	3600
1500	1	1500

#4. Do you want operating levers to be interlocking or non-interlocking?
Interlocking

#5. If interlocking levers are desired, do you want more than one master lever? If so, state how many, and send rough sketch showing groups of dimmers to be controlled by each.

Four Masters

WHITE
LOOOOO
RED

BLUE
LOOOOO
HOUSE

For houses
 of 1000 to
 1500 seats.

These are typical of the specifications received for houses with seating capacities of 1000 to 1500. This dimmer bank would require a space of about 7 feet long, 4 feet high and 2 feet deep.

#6. In addition to the master levers do you want slow wheel drive as illustrated on page 117?
No but a second master lever is required, to permit operating any or all dimmers simultaneously

#7. Do you want operating levers equipped with circuit indicating labels as described on page 23?
Yes

#8. Give construction desired, referring to figure number of illustration as given on page 25.
Refer an arrangement similar to figure #26 except that the levers should be in two rows as shown by sketch, in order to bring them as close together as possible

#9. If figure six or twenty-six construction, advise if steel front is desired.
Sheet steel front should be provided

#10. Where is dimmer to be mounted, in relation to switchboard?
Dimmer is to be mounted above the switchboard so that the steel front will line up with the face of the switchboard

#11. What are dimensions of available space for mounting the dimmer?
90" long - 42" deep - Height is unlimited

#12. Make rough sketch giving dimensions of switchboard and dimensions of space in which dimmer is to be mounted.

If necessary, the dimmer can overlap the switchboard at either end, but would like to limit it to the same length as the switchboard



from theater owners & architects

For houses of
2500 seats
or more.

#1. Will dimmer circuits be 2 wire or 3 wire?
Some 2 wire and some 3 wire as we will specify in the circuit tabulation.

#2. What is the voltage?
110 Volts for 2 wire and 110/220 for 3 wire circuits.

#3. Give number of lamps and wattage of each or total wattage of all lamps to be controlled by each dimmer. Tabulate in the order in which you prefer to have the handles mounted, from left to right when facing same.

1	Amber Foots	#1	3000 watts	2 wire
2	" "	#2	2400 "	"
3	" "	#3	2400 "	"
4	Border #1		4- 1000 "	each.
5-8	" "		" "	"
11	Pockets		3000 "	"
12	Red Foots	#1	2400 "	"
13	" "	#2	2400 "	"
14	Border #1		4- 1000 "	each.
15-18	" "		" "	"
21-28	Pockets		3000 "	"
31-38	Blue		2400 "	"
51	Green		4- 1000 "	each.
52	" "		" "	"
53	White Ceiling Cove	#1	10000 watts	3 wire
54	" "	#2	8000 "	"
61	Balcony Cove		7200 "	"
62	" "		5000 "	"
63	Red Ceiling Cove	#1	10000 "	"
64	" "	#2	8000 "	"
71-74	Balcony Cove		7200 "	"
	" "		5000 "	"

#4. Do you want operating levers to be interlocking or non-interlocking?

#5. If interlocking levers are desired, do you want more than one master lever? If so, state how many, and send rough sketch showing groups of dimmers to be controlled by each.

One master lever for each color in the stage section, and also one for each color in the house section. Seven in all.

Amber	-----I	Y----- White
Red	-----I	Y----- Red
Blue	-----I	Y----- Blue
Green	-----I	

#6. In addition to the master levers, do you want slow wheel drive as illustrated on page 117?

#7. Must have slow motion drive.

#8. Do you want operating levers equipped with circuit indicating labels as described on page 237?

#9. The indicating labels should be colored and should bear the number specified for each circuit in the tabulation under item #3.

#10. Give construction desired, referring to figure number of illustration as given on page 25.

Similar to number 25, but the stage levers should be in four rows, one color per row, and the house levers should be in three rows.

#11. If figure six or twenty-six construction, advise if steel front is desired.

#12. Steel front must be furnished in relation to switchboard.

#13. Where is dimmer to be mounted?

#14. Above the switchboard.

#15. What are dimensions of available space for mounting the dimmer?

#16. Eleven feet nine inches long, forty-six inches deep, and eight feet high. If possible the length of the dimmer should be limited to 10 feet, but it can overhang the switchboard at the right over the passageway, if necessary.

#17. Make a rough sketch giving dimensions of switchboard and dimensions of space in which dimmer is to be mounted.

Operating levers should be as low as possible so that the operator can easily reach them

For houses with seating capacities of 2500 or more, these typical specifications enable the proper selection of dimmer equipment necessary to handle such larger installations. The dimmer for a house of 2500 would be about 10 feet, 11 inches long, 70 inches high and 24 inches deep.

C-H Portable Dimmers

for the small theater, traveling show, private playhouse, hall or residence

PORTABLE C-H dimming equipment, in the various forms shown, fills the lighting control needs of the traveling show, small theater, private playhouse or hall efficiently and with nearly the same perfection of dimming supplied by the larger "Simplicity" installations in leading theaters throughout the country.

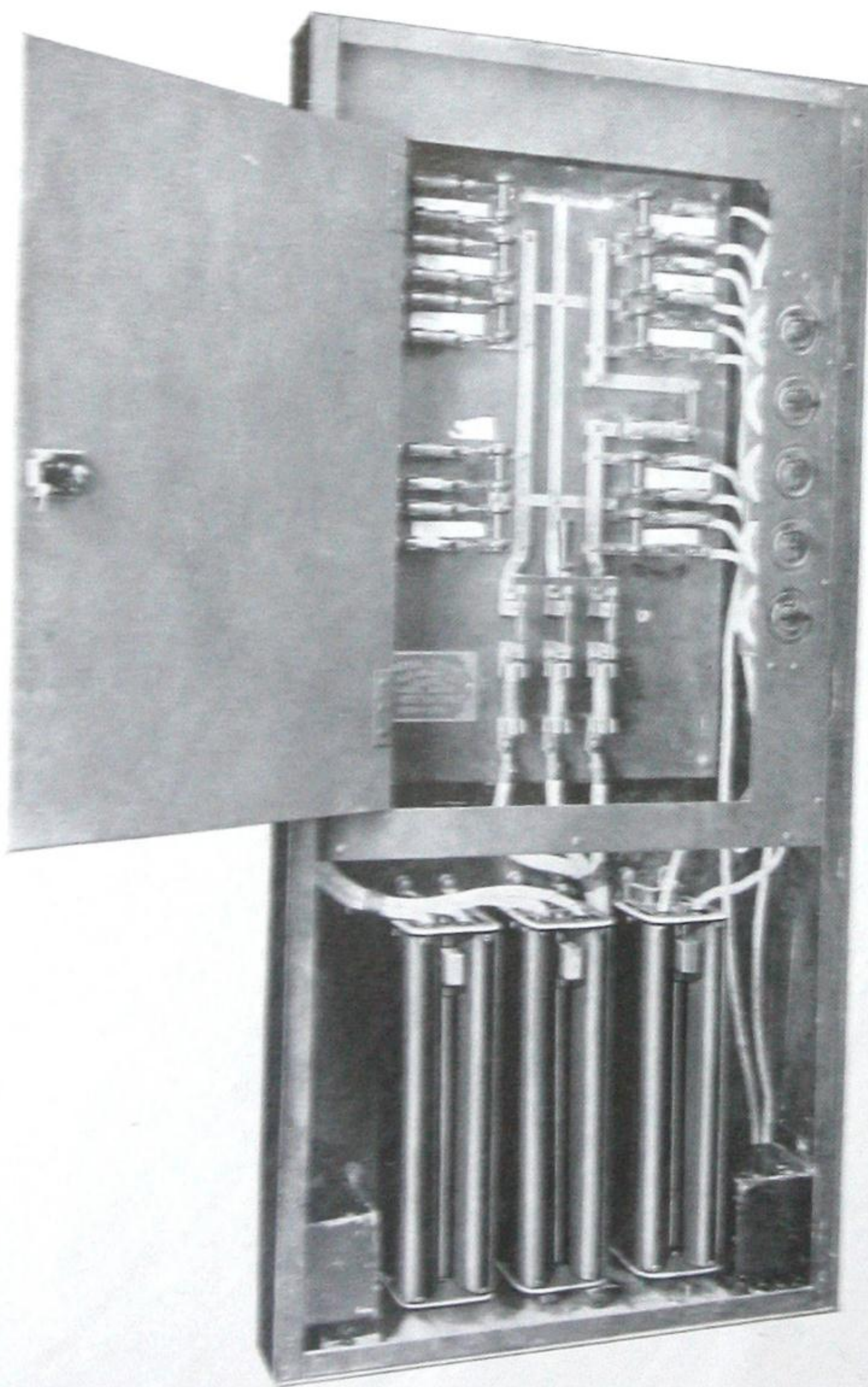
For the use of traveling shows, and for augmenting dimmer equipment already installed, small, compact cases are made, which enclose Cutler-Hammer



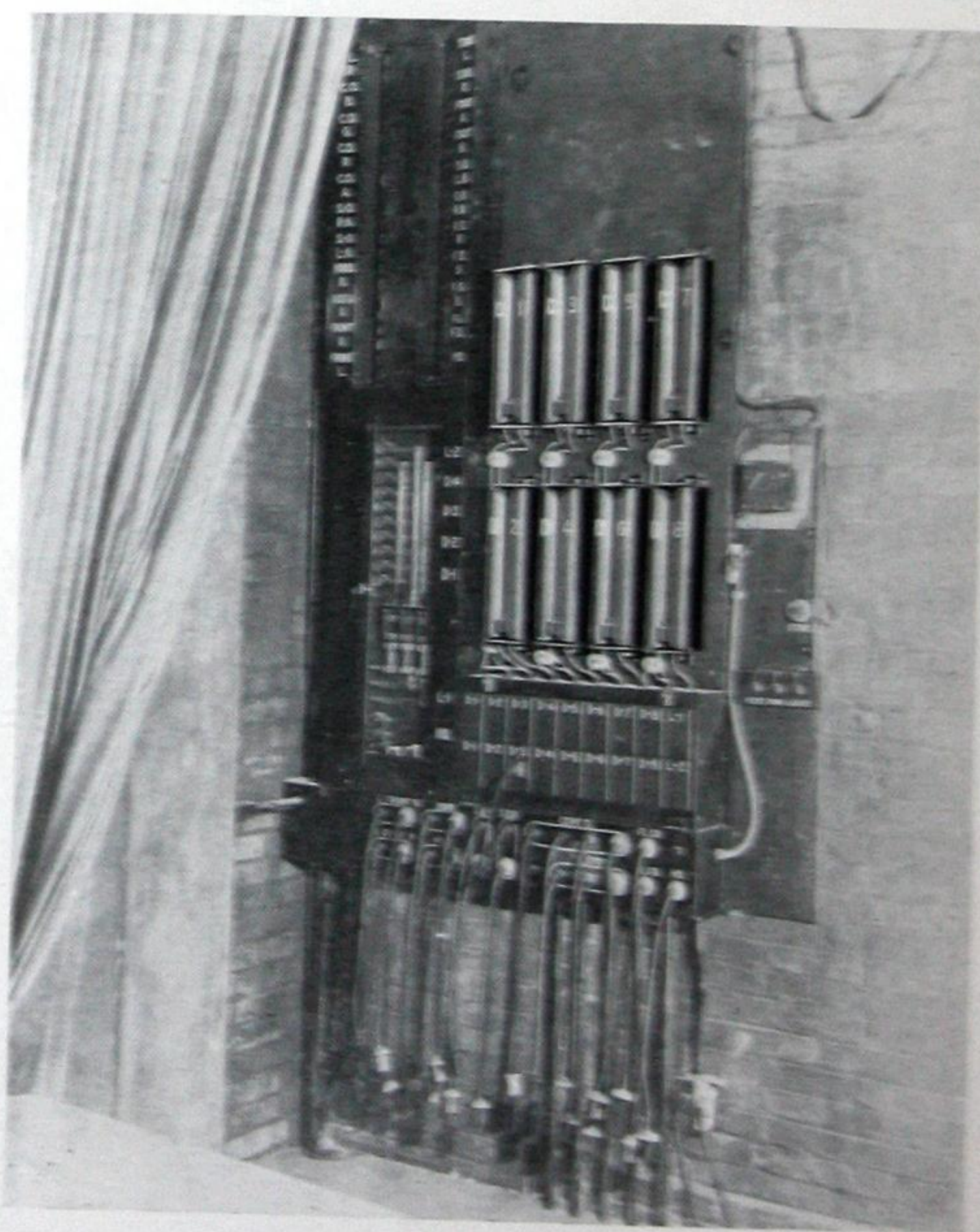
A Cutler-Hammer Slider Type Resistance Dimmer adapted for use in portable dimming equipment. These come in two sizes, of 300 and 1,000 watt capacities.

Slider Dimmers for dimming lights in the playhouse in which the company performs. Each case is complete for shipping and provided with the necessary cable for plugging into the lighting circuits.

The Cutler-Hammer Slider Dimmers are made in two sizes, of 300 and 1,000 watt capacities respectively.



Showing the adaptation of C-H Portable Dimmers for switchboard mounting in small private theaters. This installation at the Lenox School, N. Y. C., is very compact and fully enclosed for safety.



An installation of C-H Portable Dimmers mounted two rows high on the switchboard in the Playhouse at Lewellyn Park, Orange, N. J.

The dimmers of the larger size are only 20 inches high. Each dimmer circuit is equipped with an enclosed switch which is mounted above the dimmer. The dimmer sliders may be moved independently or simultaneously by means of an interlocking bar extending almost the length of the case.

An application of circular plate dimmers installed in a portable shipping case is shown on this page. This is a high capacity outfit and is built complete with enclosed switches, interlocking control, master lever, and cable for plugging in.

Combination outfits incorporating both the slider type and circular plate type dimmers are highly flexible and complete, the slider type dimmers serving for spotlight control while the circular plates handle circuits in the foots, strips, borders, etc.

The C-H Slider Dimmers can also be grouped and used in permanent installations for smaller playhouses, halls and private residences as shown in the accompanying illustrations. They furnish high grade and adequate lighting control for such purposes.

The round plate dimmer shown, is also suitable for wall mounting in lodge halls, churches and similar places. Supplied with either one or two plates,

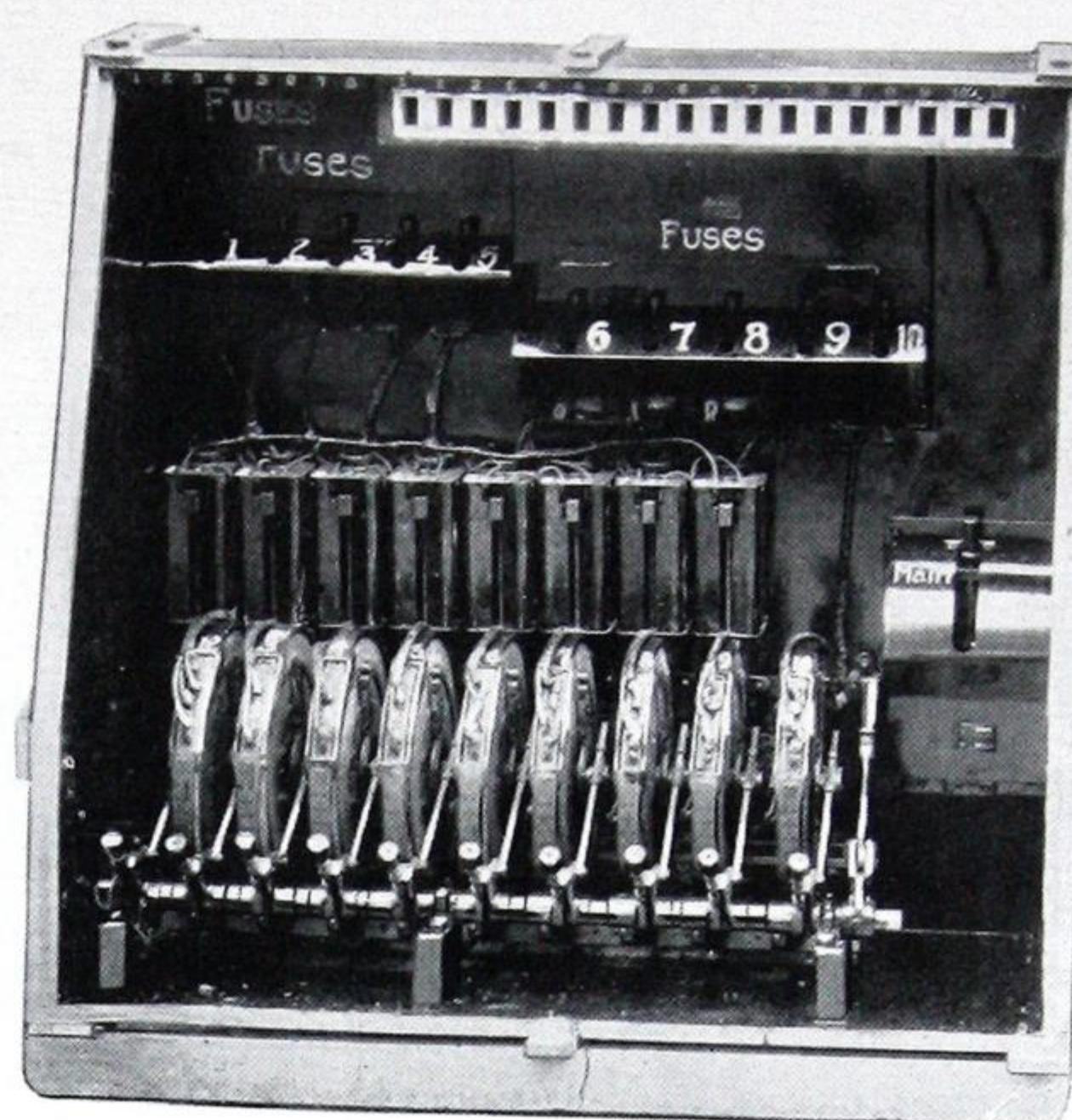
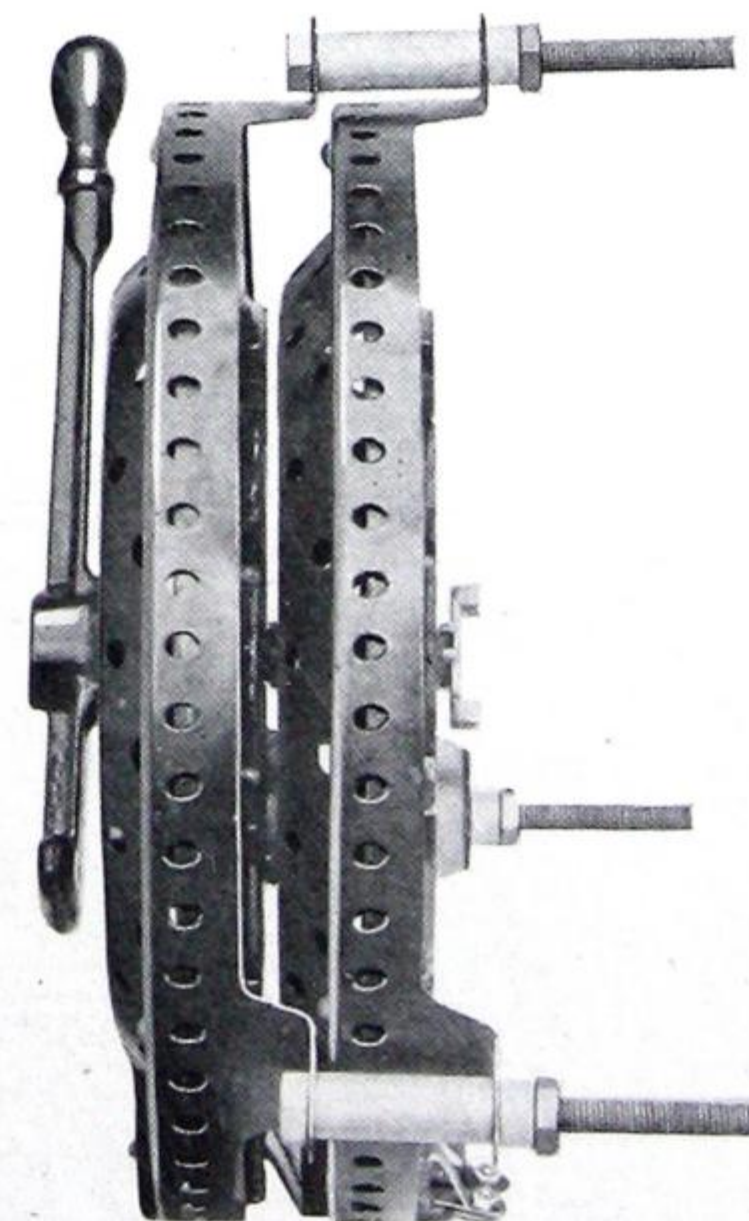
the standard dimmer is arranged for mounting directly against the wall or switchboard with the operating lever in front. By the use of a special bracket, however, it can be mounted perpendicular to the wall



The C-H Slider Type Dimmer is particularly adaptable for control of portable spotlights. Fixed to the standard as shown, its operation does not tend to tip over or jar the light.



C-H Circular Plate Dimmer with moulded resistor plate for wall mounting in lodge halls, churches, etc. All live parts are fully enclosed for neatness and safety.



Showing one-half of a C-H Portable Dimmer equipment made in two sections, each of which can be checked as baggage when accompanying the company on the road. By use of this equipment the stage lighting is installed. The sixteen slider type dimmers are in baby spot light circuits. The round plate dimmers control circuits in the foots, strips and borders.

where space limitations require it. These dimmers are capable of controlling metallic filament lamps up to a total load of 2640 watts. They may be used with either direct or alternating current in continuous duty. All live parts are fully enclosed for neatness and safety.

The compact construction of all the above C-H dimmer types makes them especially applicable for portable illumination control equipment.

Other Cutler-Hammer products used in theaters, halls, auditoriums, schools, hotels and similar public gathering places



CUTLER-HAMMER engineers have also developed a complete line of control apparatus for all the electrical units now used in modern buildings; such units as air compressors, refrigerating machines, pumps, ventilating systems, etc. These engineers will be glad to help you, or your architect, solve any of the electrical problems which may confront you.

All Cutler-Hammer apparatus is designed to stand up under unusually severe service. All current carrying parts are amply proportioned. Both resistor and metallic parts are protected against the effects of moisture. This is of particular advantage when controllers are mounted in damp locations.

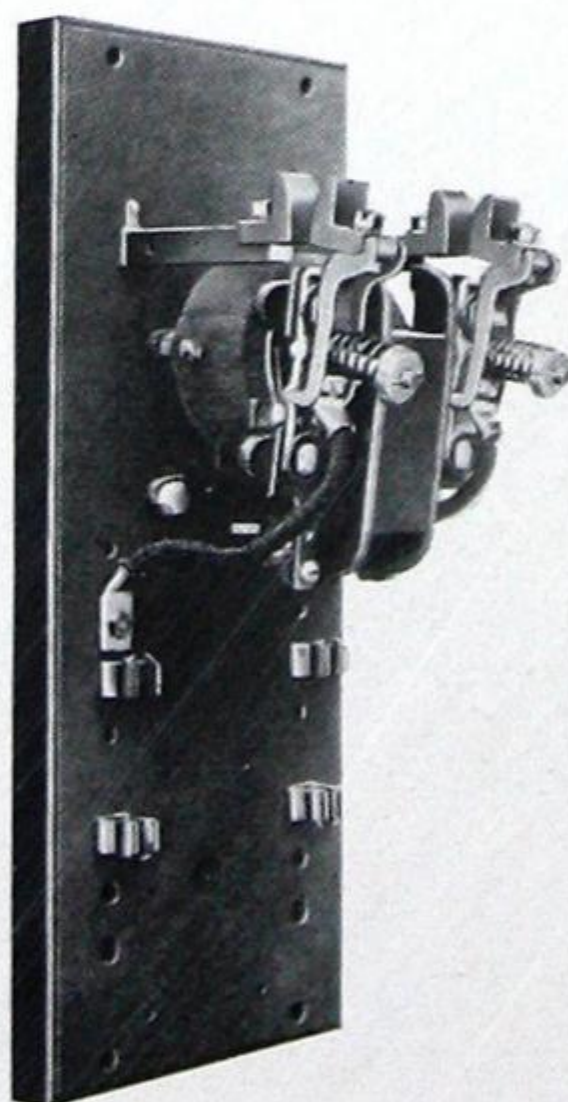
Here is a typical list of some of the control which Cutler-Hammer has furnished for use in theaters, halls, auditoriums, schools, hotels and similar gathering places.

Float Switches

For sprinkler systems, sump service, etc. Control the level of the water automatically. Tank operation starts the pump motor at low level and stops it at high level. Sump operation starts the motor at high level and stops it at low level.

Pressure and Vacuum Regulators

For automatically controlling motors driving pumps, compressors, etc. Can be used on systems containing air, gas, water, or any other fluid not injurious to the copper diaphragm.



C-H 9580 Magnetic Switch especially adapted for use in connection with remote control and pre-selection boards in theater dimmer installations.



A bank of Cutler-Hammer Fan Controllers in the Rialto Theater, Louisville, Ky.

Remote Control Switches

For automatically controlling groups of lighting circuits from one or more remote push button stations located in box office, manager's office, etc. Also used to control large building and theater signs from remote points such as box office, etc.

Starters and Speed Regulators

For motor-driven machines of any kind, including blowers, fans, pumps, curtain hoists, ash lifts, electric elevators, etc.

Generator Field Rheostats

For motor-generator sets to adjust voltage.

Electro-Magnets

For special stunts — as on wall (concealed) so that actor with metal vest can be hung up with apparently no means of support.

Resistors

For projection machines.

Electric Strip Heaters

Two feet long and flat like a ruler, for heating isolated, exposed ticket booths, valve houses on fire sprinkler systems, etc.

Electric Lamp Sockets, Switches, Receptacles, Plugs, etc.



A partial list of installations of C-H "Simplicity" Theater Dimmers

The fact that the largest and most modern theaters in the country choose Cutler-Hammer Theater Dimmers in planning their lighting control equipment only substantiates the fact that they are the most satisfactory, dependable and economical dimmers, over a period of years, for theaters of any size, large or small.



Users of Cutler-Hammer Dimmers not only obtain the best results to attract and please their patrons but are assured of minimum cost because of long life and maintenance expense that is practically nil.

The view shown is of the mammoth new Paramount Theater and Office building, New York City. Rapp and Rapp, architects.

"It reads like a directory of theaters"

Aberdeen, Wash.

Liberty Theater
Tokay Theater

Akron, Ohio

East Market Garden Dance Hall
Keith's Theater

Alhambra, Calif.

Bard's Garfield Theater

Alexandria, La.

Rapides Opera House

Allentown, Pa.

Allentown Theater
New Colonial Theater
Majestic Theater

Allston, Mass.

Allston Theater

Altoona, Pa.

Mishler Theater

Amherst, Mass.

Agricultural School

Ann Arbor, Mich.

Masonic Temple

Ansonia, Conn.

Ansonia Theater

Arkansas City, Kansas

Burford Theater

Asbury Park, N. J.

Proctor Jones Theater

Asheville, N. C.

A. & A. S. E. Lodge

Astoria, L. I., N. Y.

Astoria Theater

Atlanta, Ga.

Howard Theater
Fulton High School

Aurora, Minn.

Aurora High School

Baltimore, Md.

Century Theater
Knights of Columbus Auditorium

Baton Rouge, La.

Columbia Theater

Bay City, Mich.

Central High School
Wenonah Theater

Bayonne, N. J.

DeWitt Theater

Beardstown, Illinois

Beardstown High School

Bellingham, Wash.

American Theater

Bell, Calif.

Bell Union High School

Belleville, Ill.

Lincoln Theater
New Academy Theater

Benton Illinois

Hippodrome Theater

Berkeley, Calif.

Chimes Theater

Beverly, Mass.

Beverly High School

Bingham Canyon, Utah

High School

Birmingham, Ala.

Frolic Theater
John Herbert Philips High School
Masonic Temple
Temple Theater

Bloomington, Ill.

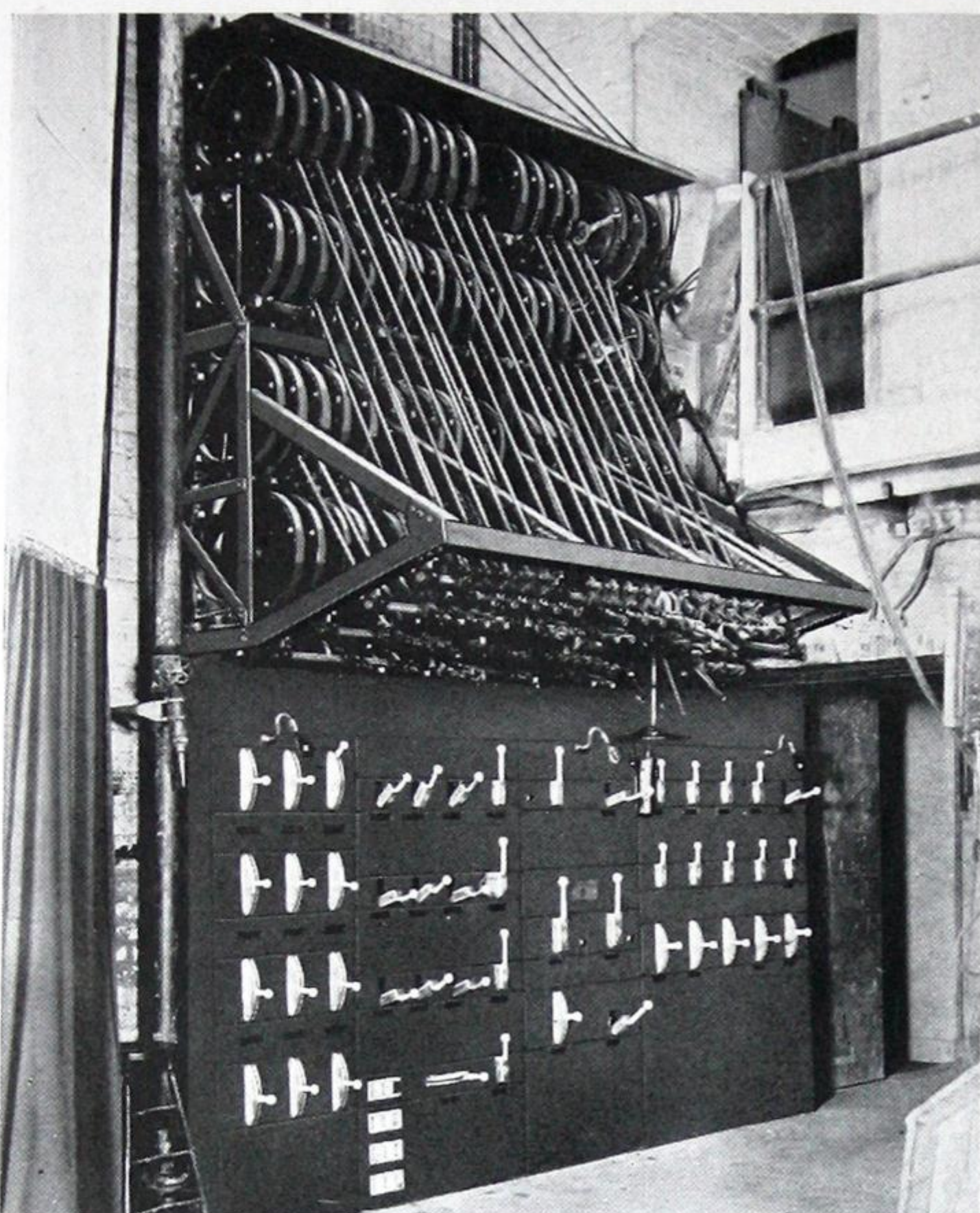
Bloomington Consistory
Majestic Theater

Bloomfield, N. J.

Coliseum

Boston, Mass.

Arlington Theater
Boston Consistory
Boston Masonic Temple
Boston Opera House
Codman Square Theater
Colonial Theater
Commonwealth Olympia (Allston)
Copley Repertoire
Columbia Theater
Cyclorama Bldg.
Eggleston Square Theater
Fenway Theater
Franklin Park Theater
Gaiety Theater
Globe Theater
Gordon's Olympia Theater
Grand Opera House
Keith's Theater, Washington St.
Lancaster Theater
Loew's New Columbia Theater
Loew's Orpheum Theater
Modern Theater
Park Theater
Plymouth Theater



An attractive dimmer layout and installation in the Masonic Temple, Detroit. Minimum space is taken by installing the dimmers above the switch-board.

Boston (continued)
Scolly Square Olympia Theater

Shawmut Theater
St. James Theater
Shubert Theater
Strand Theater
Tremont Theater
Waldorf Theater
Wilbur Theater

Bremerton, Wash.

Liberty Theater
Masonic Temple

Bridgeport, Conn.

Warren Harding High School
Polis Theater

Brockton, Mass.

City Theater
Olympia Theater

Brookline, Mass.

Boston College

Brooklyn, N. Y.

Bay Bridge Theater
Gates Avenue Theater
Keap Street Theater
Keeney's Bay Bridge Theater
Keith's Greenpoint
Keith's Prospect
Republic Theater
Saratoga Avenue Theater
St. John's School
Terminal Theater

Brownsville, Pa.

Wright Amusement Co.

Buffalo, N. Y.

Buffalo Consistory
Lafayette Theater
Loew's State
Majestic
Shea's Buffalo
Shea's Vaudeville
Shea's Hippodrome
Shea's North Park
Shubert's Tech.

Butte, Mont.

Masonic Temple

Cambridge, Mass.

Central Square Theater
Masonic Temple

Canton, Ohio

Masonic Temple

Carbondale, Pa.

Carbondale Theater

Casper, Wyoming

High School

Champaign, Ill.

Champaign Theater

Chanute, Kansas

Kansas Memorial Building

Charleston, Mass.

Thompson Theater

Charleston, Pa.

Kearse Theater

Charleston, W. Va.

Masonic Temple
Scottish Rite
Virginia Theater

Charlotte, N. C.

Graver Theater

Chattanooga, Tenn.

Tivoli Theater

Chelsea, Mass.

Olympia Theater

Chicago, Ill.

Alvernia High School
Apollo Theater
Art Institute
Auditorium Theater
Austin High School
Banner Blue Lodge
Blackstone Theater
Capitol Theater
Carter Harrison High School
Central Park Theater
Crane Technical High School
Chicago Theater
Diversey Theater
Driscoll's Danceland
Garrick Theater
Goodman Hall, Art Institute
Granada Theater
Harding Theater
Harris Theater
Howard Theater
Hyde Park High School
Illinois Theater
K. C. of Memorial Bldg.
Lakeview High School
LaSalle Theater
McVicker's Theater
Marshall Square Theater
Medinah Temple
Mercy High School
Milwaukee Sawyer Theater
Municipal Auditorium Tuberculosis Sanitarium
Nicholas Senn High School
Olympic Theater
Orchestra Hall
Palace Theater
Pantheon Theater
People's Theater
Pershing Palace Cafe
Princess Theater
Ravinia Theater
Riviera Theater
Roosevelt Theater
Sawyer Theater
Selwyn Theaters
Senate Theater
State-Lake Theater
Stratford Theater
Studebaker Theater
Terminal Theater
Tivoli Theater
Uptown Theater
West Englewood Theater
Willibrink Theater
Woods Theater
Woodlawn Theater

Chicago Heights, Ill.

Lincoln-Dixie Theater

Chisholm, Minn.

Chisholm Jr. High School

Cincinnati, Ohio

B. F. Keith's Theater
Capitol Theater
Cox Theater
Olympic Theater
Orpheum Theater
Grand Opera House
Lyric Theater
Palace Theater
Strand Theater
Walnut Theater

Clarksburg, W. Va.

F. R. Moore Theater
Robinson Grand Theater

Cleveland, Ohio

Allen Theater
Bandbox
Columbia Theater
Hanna Theater
Heights Masonic Temple
Hippodrome Theater
Keith's Palace
Keith's 105th St. Theater
Keith's Theater
Masonic Temple
Old B. of L. E. Bldg., Auditorium
Loew's Park
State Theater
Stillman Theater
Woodward Masonic Temple

Clinton, Mass.

Philbin Theater

Clinton, Okla.

New Theater

Coffeyville, Kansas

Coffeyville High School

Columbus, Miss.

Princess Theater

Columbus

James Theater

Concord, Mass.

Concord Armory
Concord Masonic Temple

Council Bluffs, Iowa

Broadway Theater

Dallas, Texas

Fair Park Auditorium
Hope Theater
Majestic Theater
Methodist Church
Palace Theater

Danville, Ill.

Danville High School

Davenport, Iowa

Capitol Theater

Dayton, Ohio

B. F. Keith's Theater
Masonic Temple

Deland, Fla.

Deland Amusement Co.

Denver, Colo.

America Theater
Colorado Theater
Consistory
Denham Theater
El Jebel Theater
Rivoli Theater
Victoria Theater



Des Moines, Iowa
Alhambra Theater
Theater & Office Building
Women's Club

Detroit, Mich.
Adams Theater
Broadway Strand Theater
Book Cadillac Hotel
Cass Technical High School
Castle Theater
Central High School
Cinderella Theater
Colonial Theater
Dawn Theater
Detroit Edison Auditorium Bldg.
Detroit Masonic Temple
Detroit Opera House
Eastern High School
Ferry Field Theater
General Motors Building
Grand Riveria Theater
Grande Theater
Harmony Theater
Holy Redeemer Church
Hotel Tuller
Hutchins School
I. O. O. F. Temple
Joyce School
Jesse Bonstelle Playhouse
Kovinsky Theater
Keith's Theater
Madison Theater
Masonic Temple
Meretsky Theater
Miller School
National Theater
Nordstrom School

Detroit (Continued)
Orchestra Hall
Play House
Plaza Theater
Rivoli Theater
Sacred Heart Academy High School
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East St. Louis, Ill.
Lyric Theater
Masonic Temple

Easton, Pa.
Wilmer & Vincent

Eldorado, Ark.
Eldorado High School

Elgin, Ill.
Rialto Theater

Elizabeth, N. J.
Regent Theater

Elkhart, Ind.
Elkhart High School

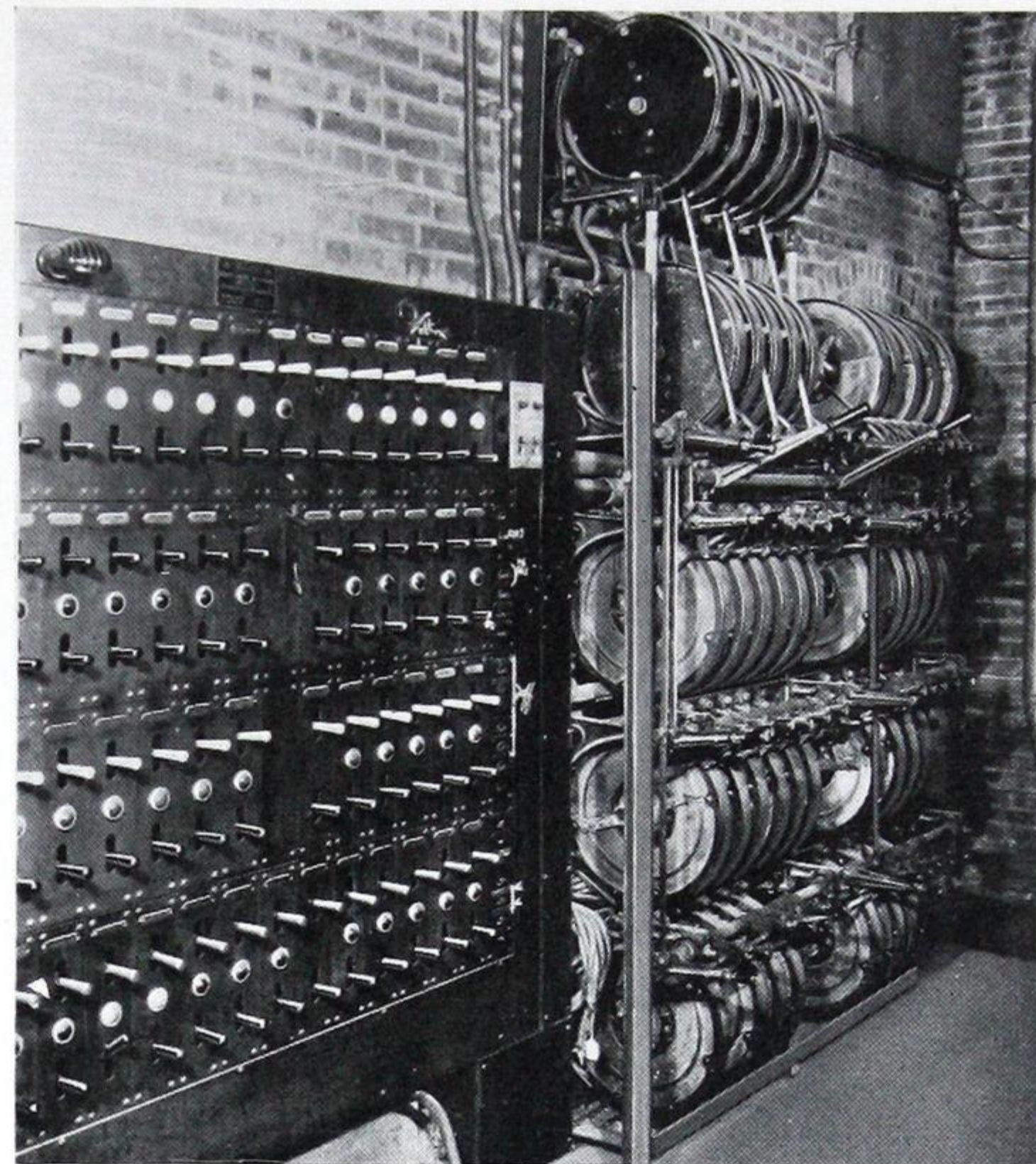
Elmira, N. Y.
State Theater

Elmhurst, L. I., N. Y.
Elks Lodge

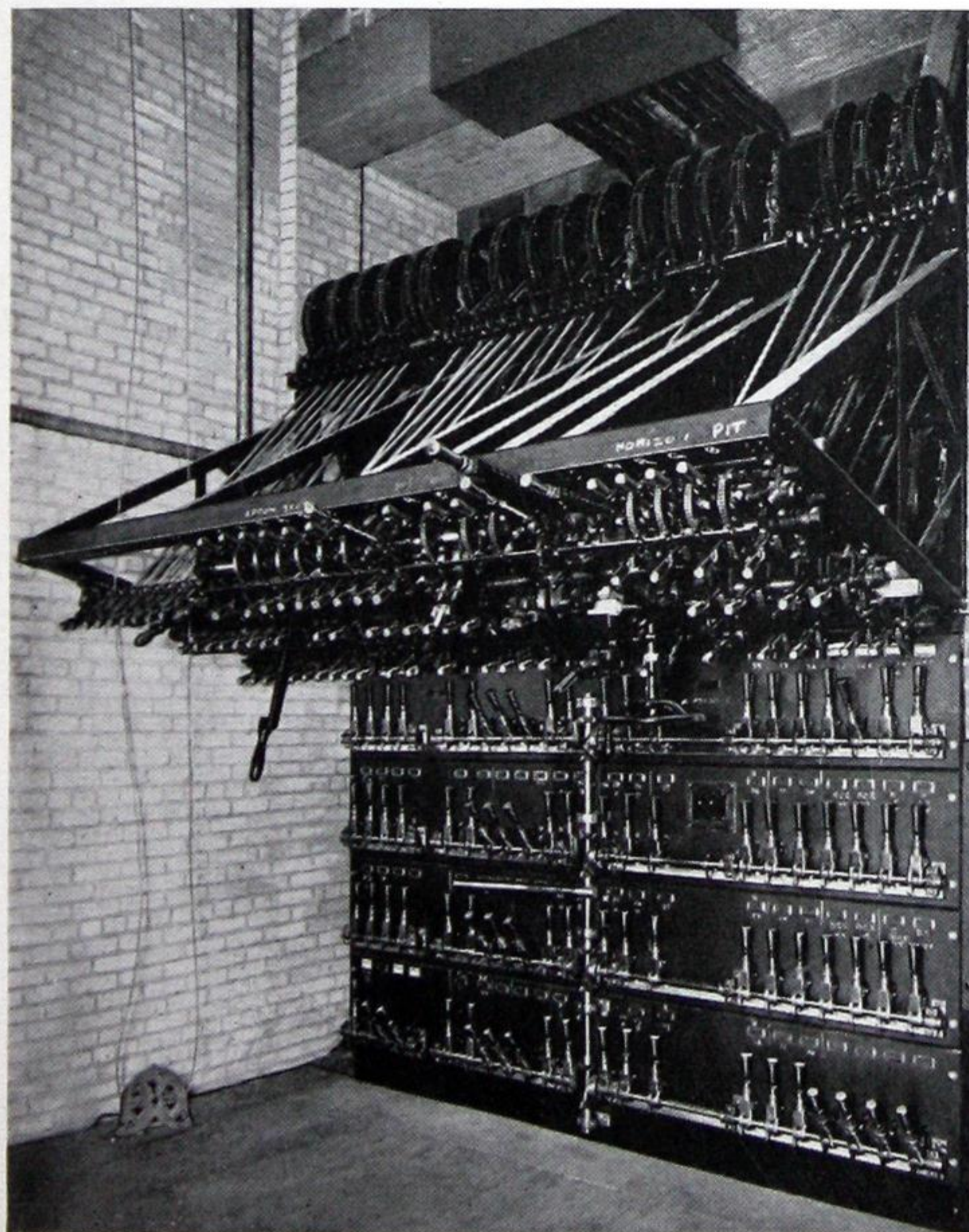
Eureka, Kans.
Memorial Home

Evansville, Ind.
Victory Theater

Everett, Wash.
Everett Theater
Elks Club



Showing the banks of "Simplicity" Theater Dimmers which control the lighting in the B. F. Keiths Rialto Theater, Louisville, Ky. The board is a Major (F. A.)



Showing C-H Dimmer installation at the Repertory Theater, Boston.

Fairmont, W. Va.
Fairmont Theater
Virginia Theater

Fall River, Mass.
Empire Theater

Flint, Mich.
Flint High School

Fort Madison, Iowa
High School

Fort Scott, Iowa
Masonic Temple

Fort Scott, Kans.
Ancient Order Scottish Rite

Ft. Wayne, Ind.
Masonic Temple
Mizpah Temple

Fox River Grove, Ill.
Fox River Grove Dance Hall

Framingham, Mass.
W. George Theater

Freeport, Ill.
Dittman Theater

Fresno, Calif.
Wilson Theater

Fullerton, Calif.
Chapman Theater

Gardiner, Me.
Gardiner Theater

Greensburg, Pa.
Strand Theater

Hammond, Ind.
Parthenon Theater

Hanford, Calif.
Hanford Civic Auditorium

Hanover, N. H.
Dartmouth College

Harrisburg, Pa.
Orpheum Theater

Hartford, Conn.
Polis Theater
State Library

Haverhill, Mass.
Academy of Music

Hibbing, Minn.
Hibbing High School

Hinsdale, Ill.
St. Joseph's Seminary

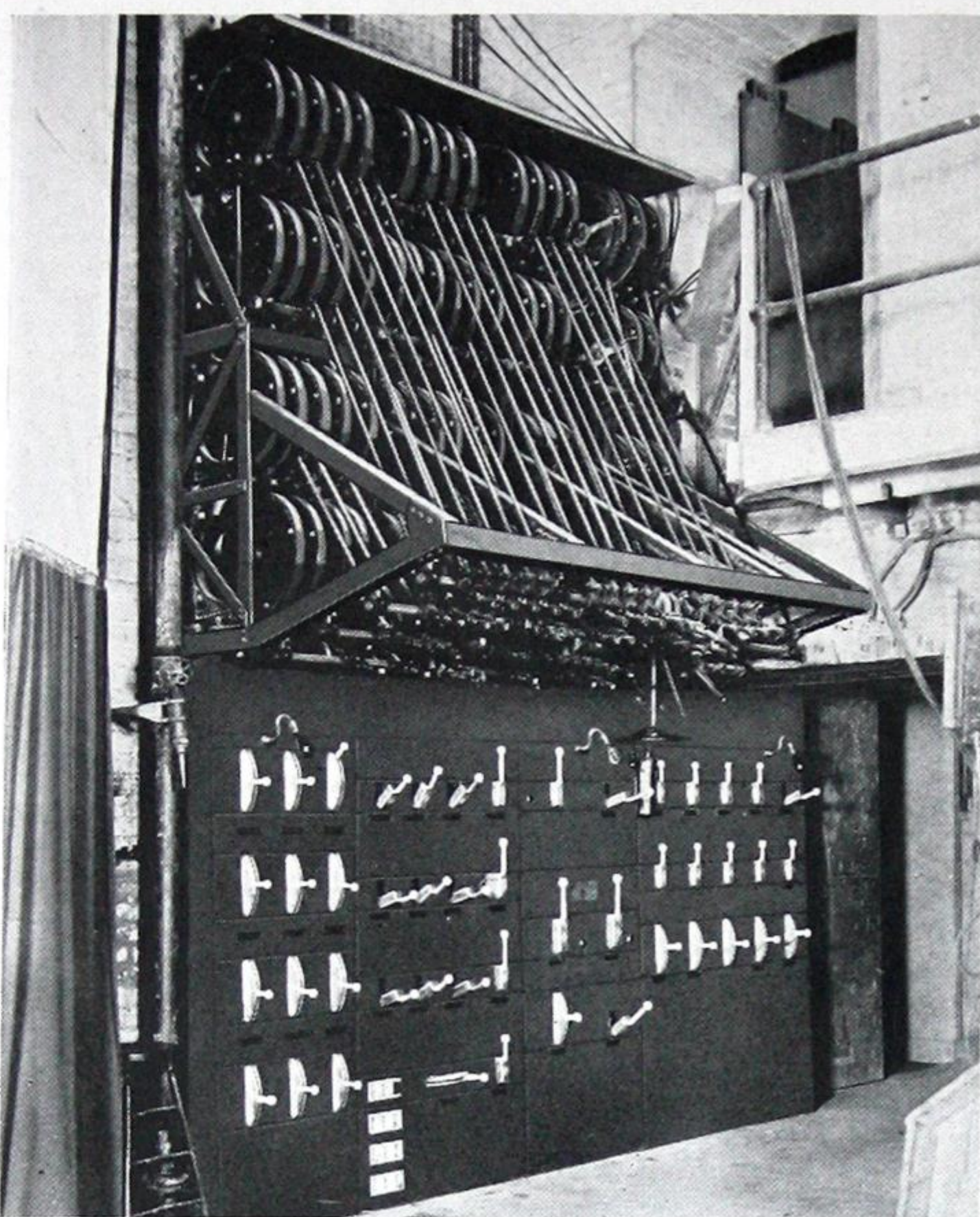
Holyoke, Mass.
Masonic Temple
Victory Theater

Hamilton, Ohio
Scottish Rite

Honolulu, Hawaii
Alpha Theater

Hoquiam, Wash.
Masonic Temple

Houston, Texas
Auditorium Theater
Majestic Theater
Scottish Rite Cathedral



An attractive dimmer layout and installation in the Masonic Temple, Detroit. Minimum space is taken by installing the dimmers above the switch-board.

Boston (continued)

Scolly Square Olympia Theater
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Harding Theater
Harris Theater
Howard Theater
Hyde Park High School
Illinois Theater
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LaSalle Theater
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Marshall Square Theater
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Municipal Auditorium Tuberculosis Sanitarium
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People's Theater
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Elkhart High School

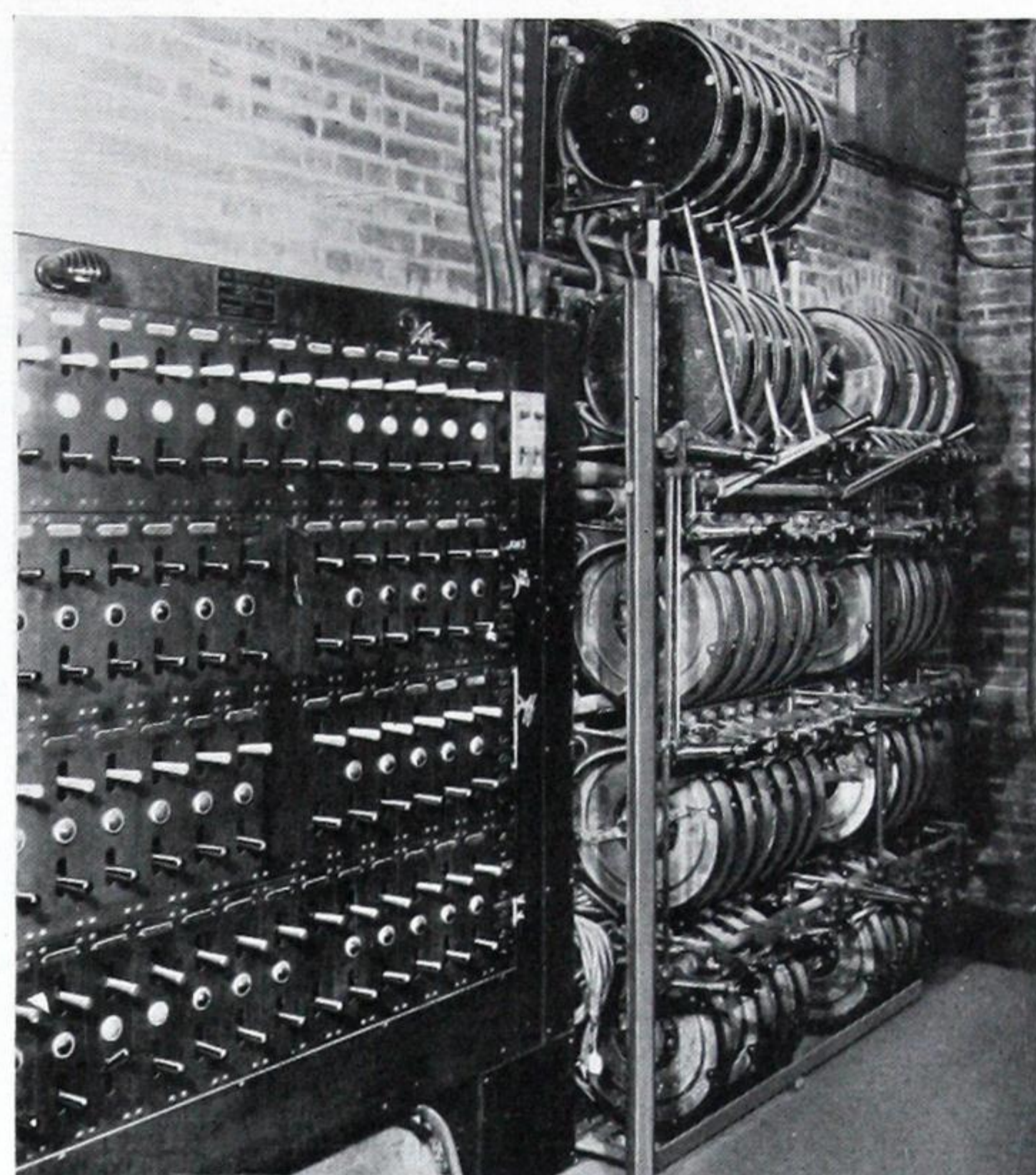
Elmira, N. Y.
State Theater

Elmhurst, L. I., N. Y.
Elks Lodge

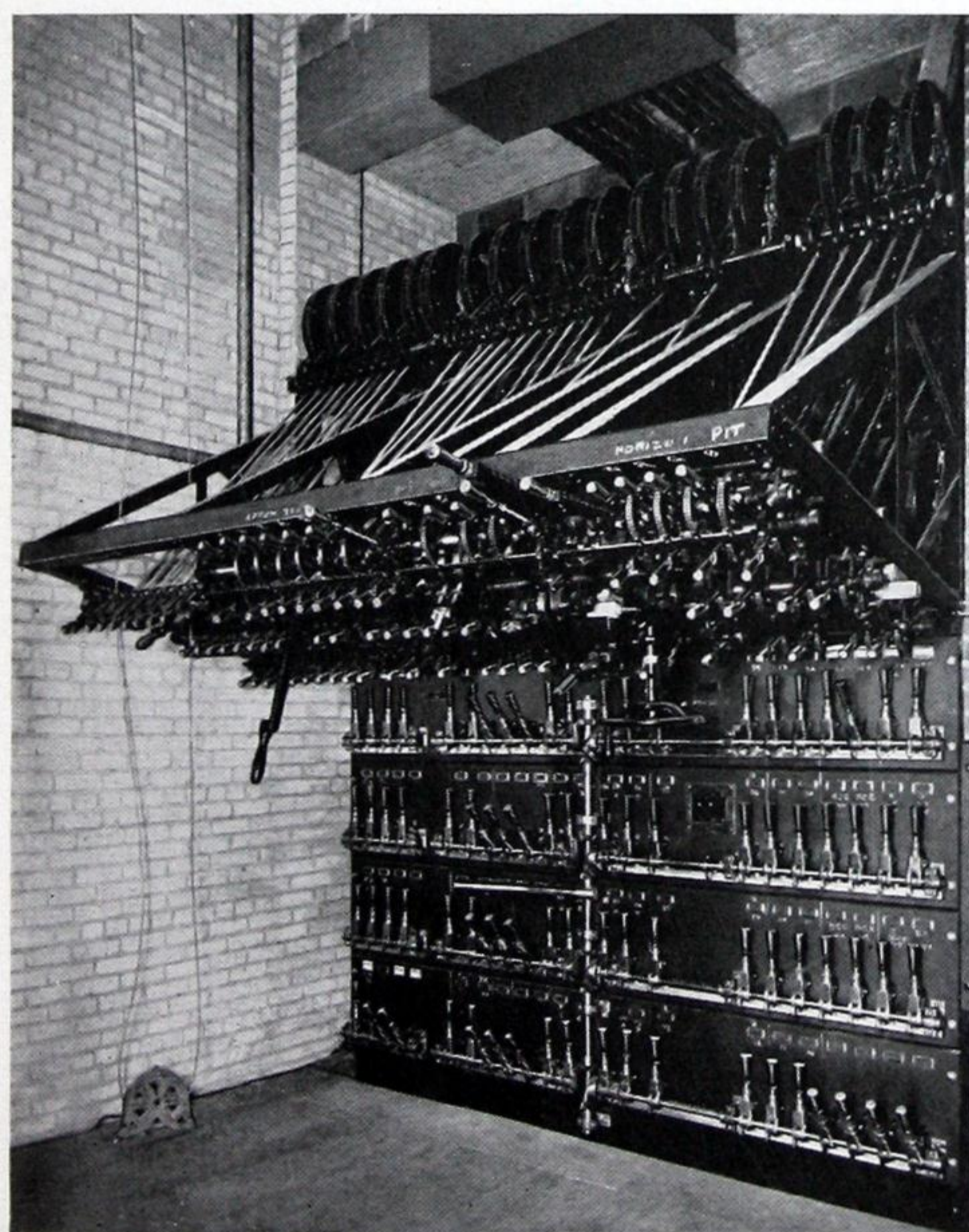
Eureka, Kans.
Memorial Home

Evansville, Ind.
Victory Theater

Everett, Wash.
Everett Theater
Elks Club



Showing the banks of "Simplicity" Theater Dimmers which control the lighting in the B. F. Keiths Rialto Theater, Louisville, Ky. The board is a Major (F. A.)



Showing C-H Dimmer installation at the Repertory Theater, Boston.

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Fairmont Theater
Virginia Theater

Fall River, Mass.
Empire Theater

Flint, Mich.
Flint High School

Fort Madison, Iowa
High School

Fort Scott, Iowa
Masonic Temple

Fort Scott, Kans.
Ancient Order Scottish Rite

Ft. Wayne, Ind.
Masonic Temple
Mizpah Temple

Fox River Grove, Ill.
Fox River Grove Dance Hall

Framingham, Mass.
W. George Theater

Freeport, Ill.
Dittman Theater

Fresno, Calif.
Wilson Theater

Fullerton, Calif.
Chapman Theater

Gardiner, Me.
Gardiner Theater

Greensburg, Pa.
Strand Theater

Hammond, Ind.
Parthenon Theater

Hanford, Calif.
Hanford Civic Auditorium

Hanover, N. H.
Dartmouth College

Harrisburg, Pa.
Orpheum Theater

Hartford, Conn.
Polis Theater
State Library

Haverhill, Mass.
Academy of Music

Hibbing, Minn.
Hibbing High School

Hinsdale, Ill.
St. Joseph's Seminary

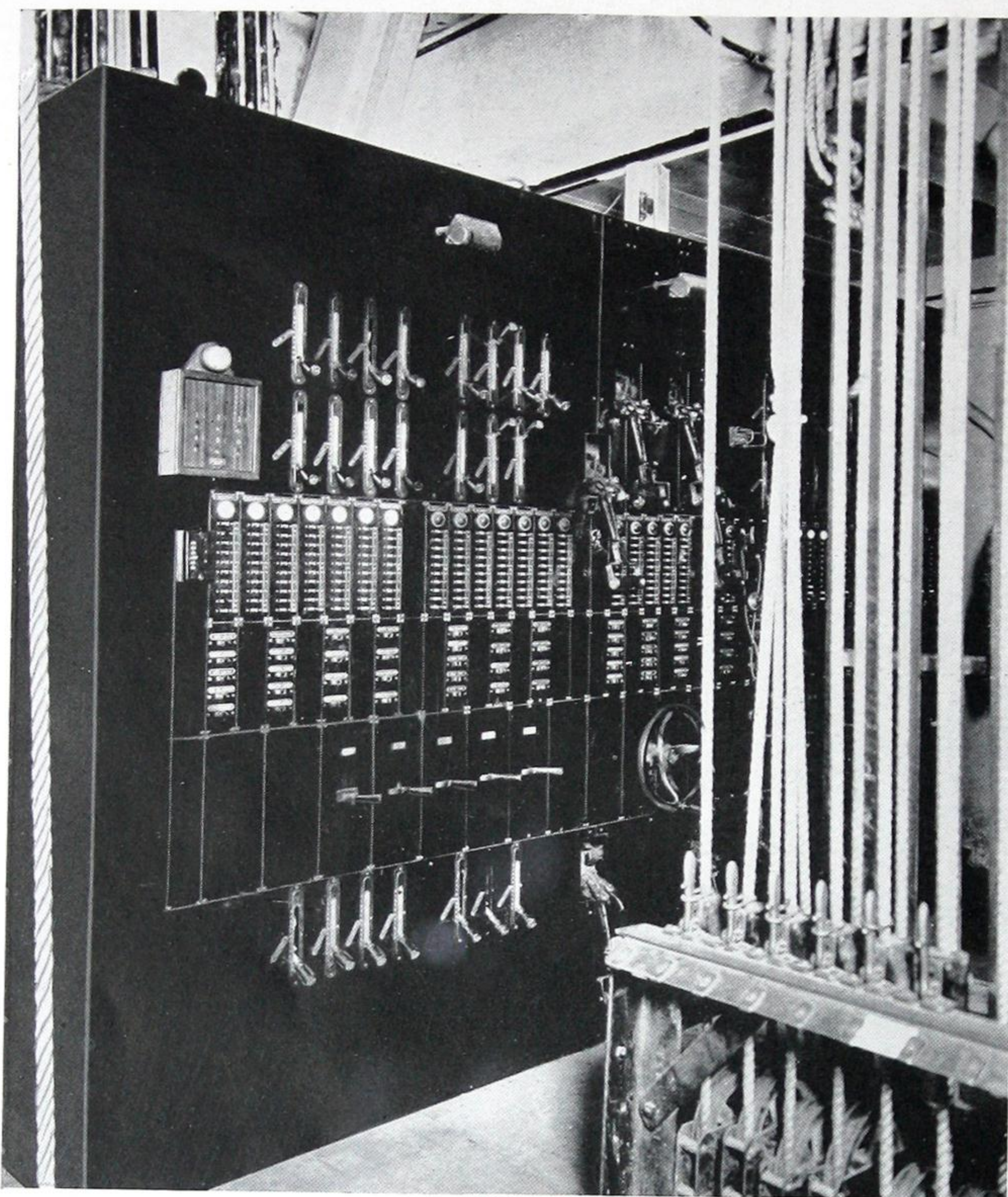
Holyoke, Mass.
Masonic Temple
Victory Theater

Hamilton, Ohio
Scottish Rite

Honolulu, Hawaii
Alpha Theater

Hoquiam, Wash.
Masonic Temple

Houston, Texas
Auditorium Theater
Majestic Theater
Scottish Rite Cathedral



*Dead front panels at the
Pantheon Theater, Chicago.
C-H Dimmers used.*

Joplin, Mo.
Mirza Temple
Missouri Memorial Hall

Kansas City, Kansas
New High School

Kansas City, Mo.
Central Junior High School
Main St. Orpheum Jr. Theater
Westport Jr. High School

Keokuk, Iowa
Grand Theater

Lake Charles, La.
Masonic Temple

La Grange, Ill.
New High School

Lake Worth, Fla.
Masonic Temple

Lansing, Mich.
Strand Theater

Lawrence, Mass.
Lawrence Masonic Temple
Majestic Theater
Palace Theater

Lebanon, N. H.
Lebanon Town Hall

Hyannis, Mass.
Hyannis Masonic Temple

Hyrum, Utah
South Cache High School

Indianapolis, Ind.
Circle Theater
Loew Theater

Inglewood, Calif.
Inglewood Union High School

Iola, Kansas
Scottish Rite Temple
Memorial Building

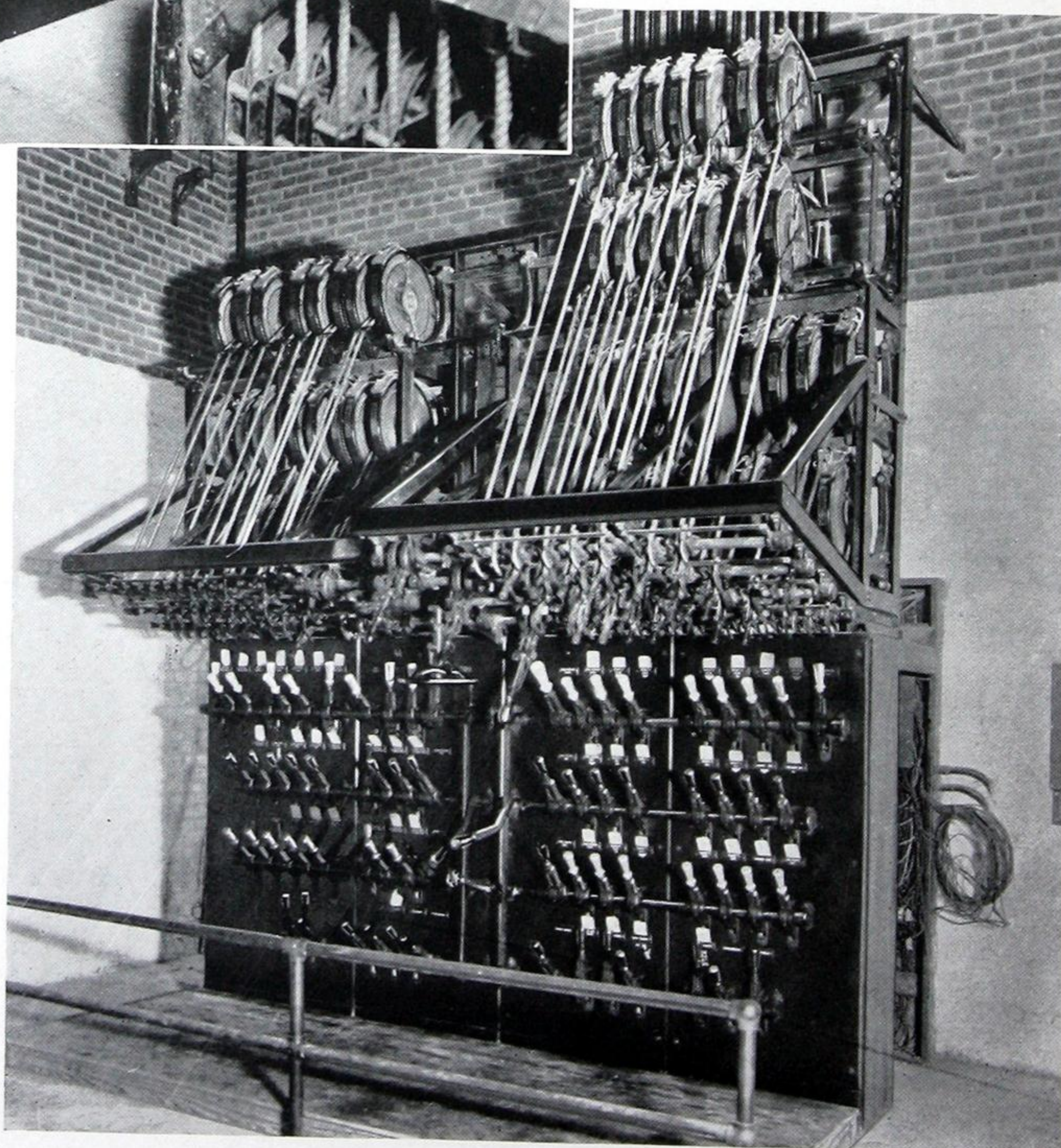
Jackson, Miss.
Masonic Temple

Jefferson City, Mo.
Miller's Theater

Jersey City, N. J.
Central Theater
Keith's Theater

Joliet, Ill.
Joliet Township High School
New Royal Theater

*Another above-the-board in-
stallation of C-H "Simplicity"
Dimmers — in the DeWitt
Theater, Bayonne, N. J.*





Leomenster, Mass.
Leomenster Theater

Lexington, Ky.
Lafayette Theater

Libby, Mont.
Kootenai Theater

Lincoln, Nebr.
Capital Theater
Lincoln Theater
Whittier Jr. High School

Logan, Utah
Capital Theater

Long Beach, Calif.
Fairyland Theater

Long Island City, N. Y.
Jackson Heights Theater

Longview, Wash.
Columbia Theater

Los Angeles, Calif.
Apollo Theater
Bard's Hillstreet Theater
Bard's Hollywood Theater
California Theater
Forum Theater
Foshay High School
Grauman's Egyptian Theater
Grauman's Million Dollar Theater
Hillstreet Junior Theater
Majestic Theater
Mason Opera House
Methodist Church
Orpheum Theater
Pantages Theater
Vermont Theater
Wilshire Theater

Louisville, Ky.
Atherton High School
Brown Theater
Elks Club
Rialto Theater

Lowell, Mass.
Lowell High School
Opera House
Strand Theater

Lynbrook, L. I., N. Y.
Lynbrook Theater

Lynchburg, Va.
Academy Theater
Marshall Lodge No. 39
Masonic Temple

Mahanoy City, Pa.
Princess Theater

Malden, Mass.
Malden Auditorium

Manchester, N. H.
Colonial Theater
Keith's Theater
Manchester High School
Practical Arts High School
West Side Junior High School

Mankato, Minn.
Teachers' College

Marlboro, Mass.
Rock Theater

McKeesport, Pa.
White's Hippodrome

Medford, Wash.
Craterian Theater

Memphis, Tenn.
McWilliams Theater
Memphis Auditorium and Market House

Miami, Fla.
Miami Theater

Milwaukee, Wis.
Alhambra Theater
Arcadia Ball Room
Bay View High School
Butterfly Theater
Crystal Theater
Davidson Theater

Milwaukee (continued)
Miller Theater
Milwaukee Auditorium
Milwaukee Normal School
Milwaukee Theater
Pabst Theater
Palace Theater
Parkway Theater
Princess Theater
Regent Theater
Riverside High School
Saxe Theater
Strand Theater
Washington High School
Wauwatosa High School
West Allis High School
Wisconsin Theater

Montreal, Canada
Metropolitan Theater
Capitol Theater

Morgantown, W. Va.
Comuntzis Theater
Strand Theater

Mt. Clemens, Mich.
McComb Theater

Mt. Union, Pa.
Shapiro Theater

Mount Vernon, N. Y.
Proctor's Theater

Nashville, Tenn.
Scottish Rite Temple

Nevada, Mo.
New High School

Newark, N. J.
Branford Theater
Loew's Theater
Newark Theater
Proctor's Theater
Rialto Theater
Schubert Theater

New Bedford, Mass.
Olympia Theater
Zeitzi Theater

New Bern, N. C.
Masonic Temple

New Castle, Pa.
Scottish Rite Cathedral

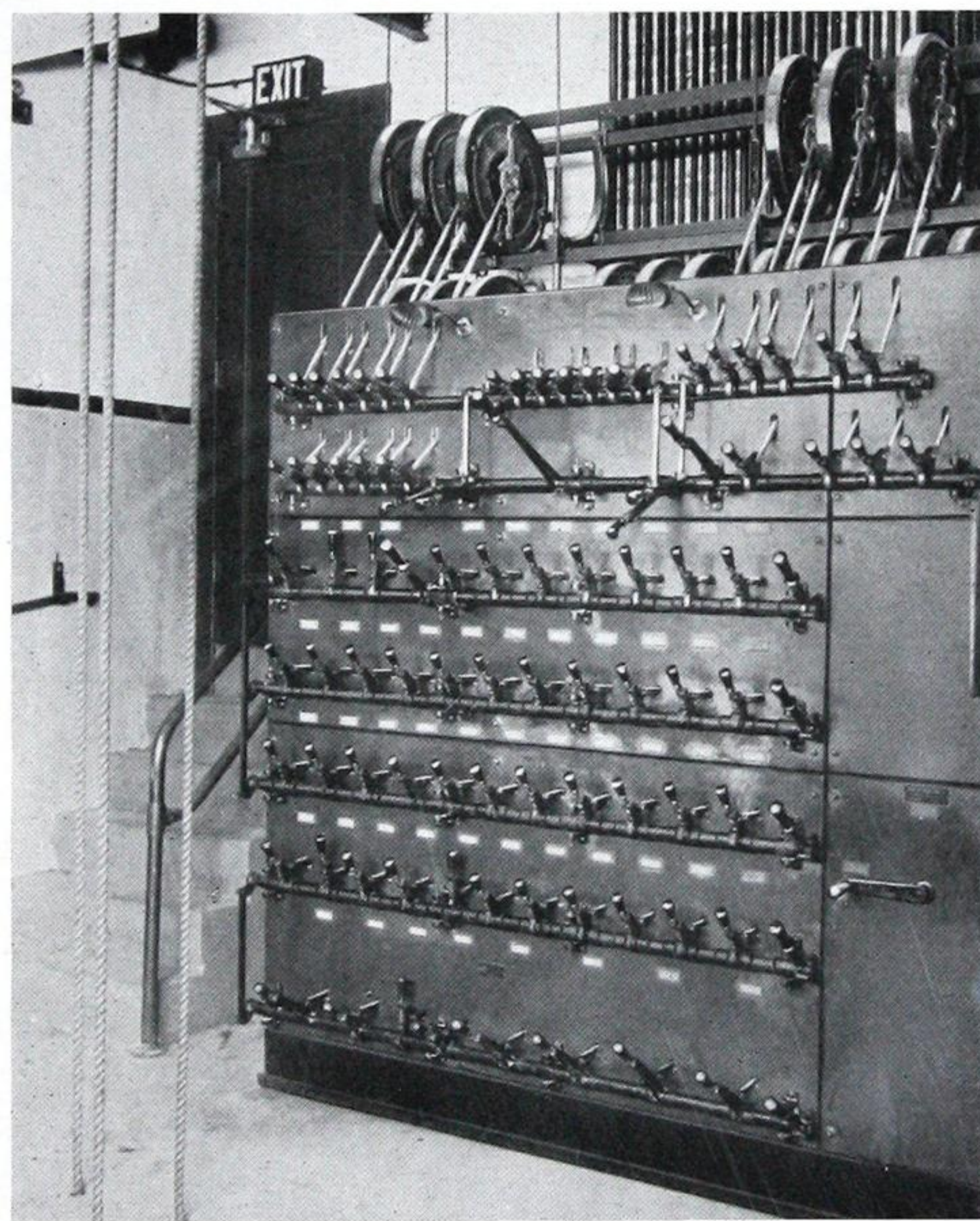
New Haven, Conn.
Bijou Theater
Hyperion Theater
Fair Haven Masonic Temple

New Orleans, La.
Elks Club
Loew's Theater

Newport, R. I.
Newport Naval Training Station

Newton, Mass.
Community Theater

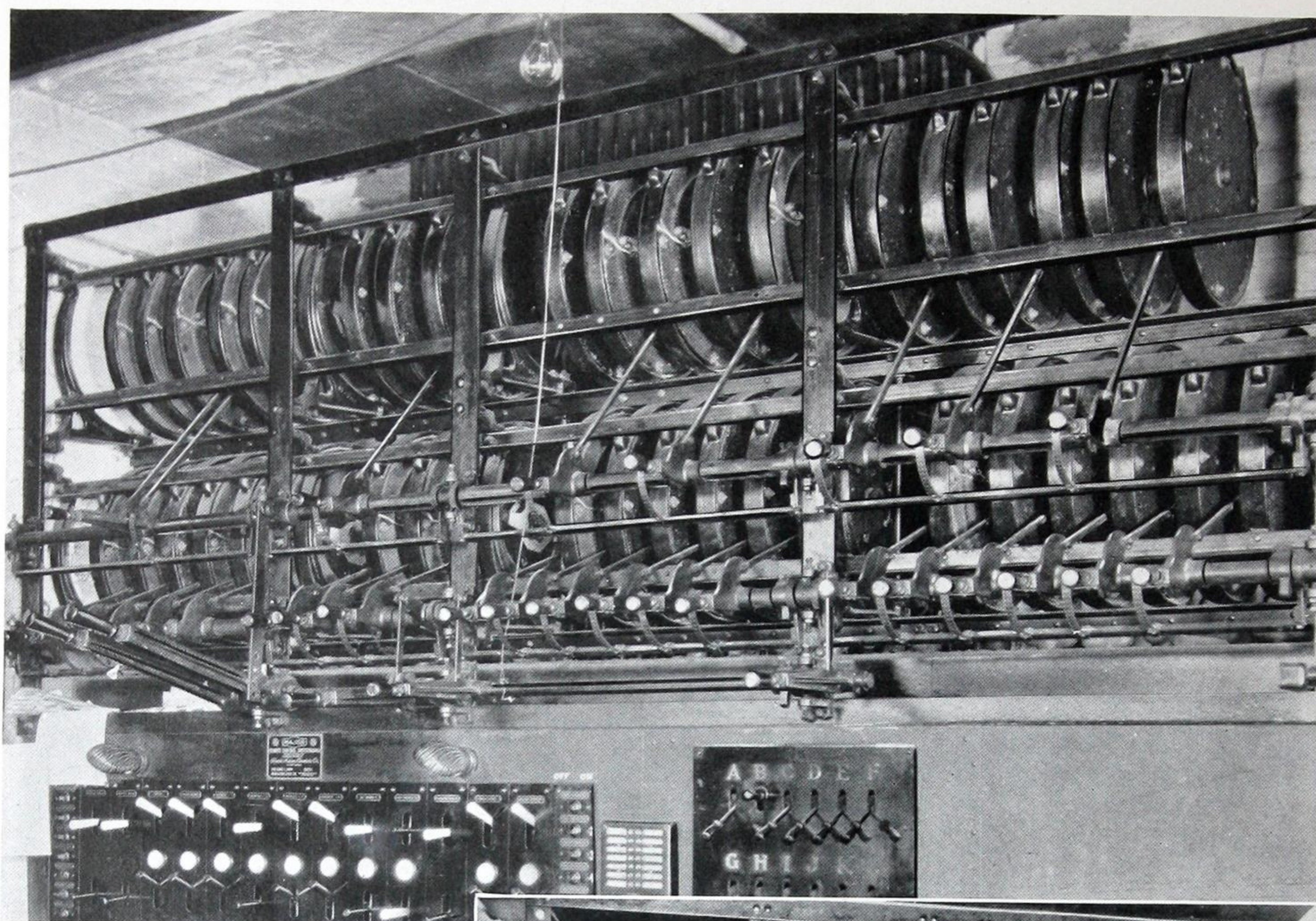
New York City, N. Y.
Academy of Music
Al Jolson Theater
Alhambra Theater
Ambassador Theater
American Theater
Arcadia Ball Room
Astor Theater
Beck's West Side Theater
Belmont Theater
Birkeley Theater
Bijou Theater
Bijou Dream Theater
Booth Theater
Bowery Savings Bank
Broadway Theater
Broadhurst Theater
Cameo Theater
Capitol Theater
Cathedral of St. John, the Divine
Chamber of Commerce
Channin's 46th St. Theater
Circle Theater
Cohan & Harris Theater
Comedy Theater
Columbia Theater



Switchboard and C-H Dimmers in the Orchestra Hall, Detroit, Michigan.

Milwaukee (continued)
Empire Theater
Excelsior Masonic Lodge
Gaiety Theater
Garden Theater
Garfield Masonic Lodge
Garrick Theater
Ivanhoe Masonic Temple
Juneau Theater
Kenwood Masonic Lodge
Kilbourn Masonic Lodge
Layton Park Theater
McKinley Masonic Lodge
Majestic Theater
Marigold Gardens
Merrill Theater
Modjeska Theater

Minneapolis, Minn.
Bryant Jr. High School
Hennepin Theater
Jefferson Jr. High School
John Marshall High School
Jordan Jr. High School
Lincoln Jr. High School
Loeb Arcade
Minneapolis Jr. Orpheum Theater
Music Hall, University o Minn.
Northeast High School
Roosevelt High School
State Theater
Washburn Junior High School

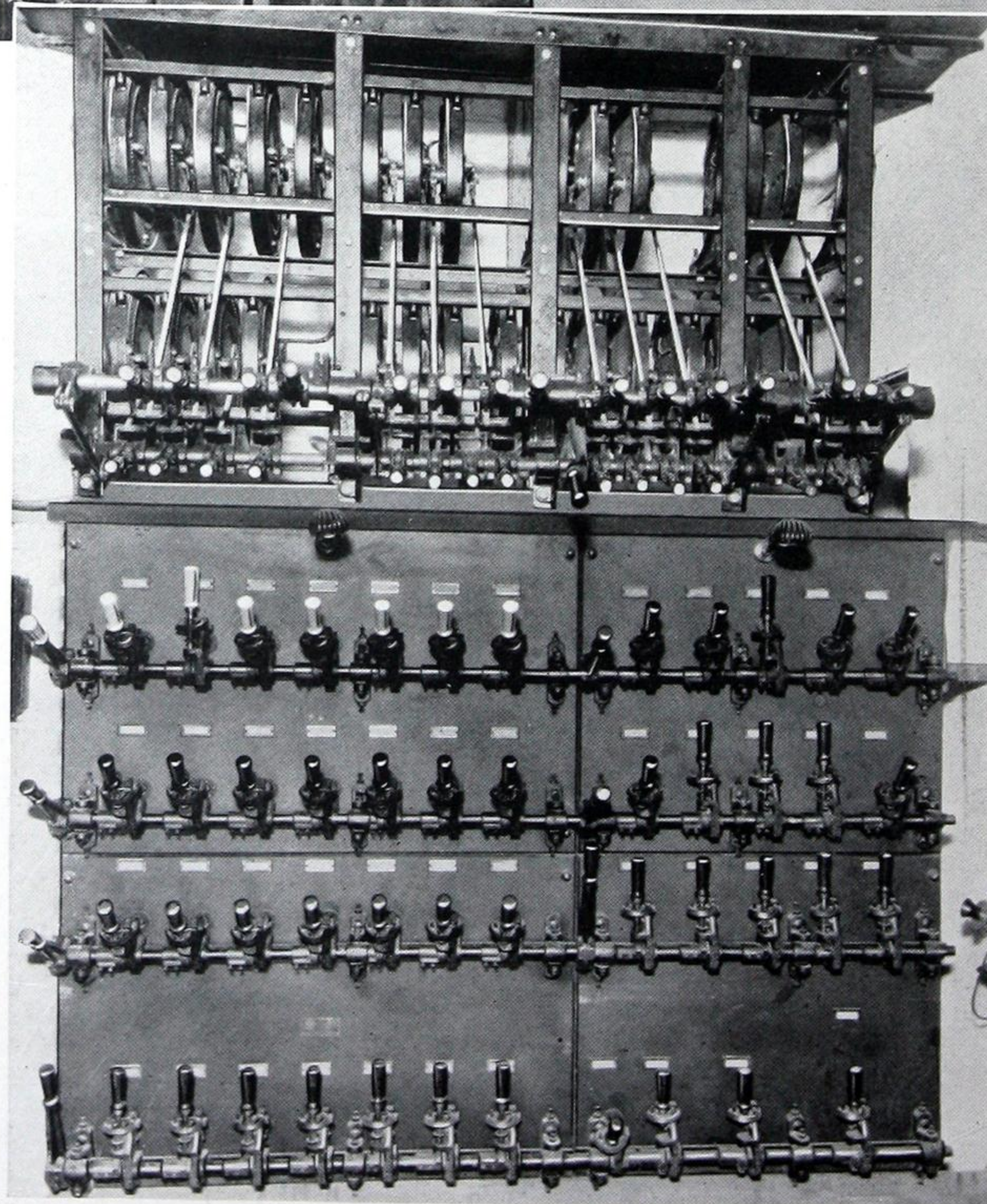


The C-H "Simplicity" Dimmer installation at Keith's, 105th Street Theater, Cleveland, Ohio.

New York City (Cont'd)

Colonial Theater
 Criterion Theater
 Crotona Theater
 Daly's Theater
 Delancey Theater
 Dutchess Theater
 Earl Carroll Theater
 Eighty-sixth St. Theater
 Endicott Johnston Theater
 Federal Reserve Bank
 42nd St. Theater
 Fifth Avenue Theater
 Finnish Workers' Association
 43rd St. Theater
 Forty-eighth St. Theater
 Forty-ninth St. Theater
 Fordham Theater
 Fulton Theater
 Gaiety Theater
 Garden Theater
 Garrick Theater
 George M. Cohan Theater
 Globe Theater
 Grand Opera House

An installation of Cutler-Hammer Dimmers in the Jesse Bonstelle Playhouse, Detroit, Mich. Switch-board built by (Mutual.)



**New York City (Cont'd)**

Grand Theater
Greeley Square Theater
Hammerstein's Lexington
Theater
Harlem Opera House
Henry Miller's Theater
Hippodrome
Hudson Theater
Hurtig Seamon Theater
International House
Irving Place Theater
Knickerbocker Theater
League of Political Education
Liberty Theater
Lincoln Theater
Little Theater
Loew's Boulevard Theater
Loew's State Theater
Lyceum Theater
Lyric Theater
Maxine Elliot Theater
Manhattan Opera House
McAlpin Hotel
McKinley Square Theater
Metropolitan Opera House
Miner's Bowery Theater
Miner's 8th Ave. Theater
Morosco Theater
Murray Hill Theater
Music Box Theater
National Cloak & Suit
New Amsterdam Theater
New York Theater
95th St. School

New York City (Cont'd)

Olympic Palace Theater
160th St. and Broadway
Theater
Palais Royal Theater
Palace Theater
Paramount Theater
Park Savings Bank
Park Theater
People's Theater
Pennsylvania Hotel
Playhouse Theater (part)
Plaza Hotel
Plymouth Theater
Proctor's 23rd St. Theater
Proctor's 28th St. Theater
Proctor's 58th St. Theater
Proctor's 125th St. Theater
Republic Theater
Rialto Theater
Rivoli Theater
Selwyn Theater
Schubert's 59th St. Theater
Sheridan Square Theater
Shubert-Belasco Theater
Steinway & Sons
Star Theater
Strand Theater
Third Ave. Theater
Thirty-ninth St. Theater
Tremont Theater
Vanderbilt Theater
Victoria Theater
Wadsworth Theater
Ward's Island Auditorium

New York City (Cont'd)

Warren Library Theater
West End Theater
Waldorf-Astoria Theater
Weber's Theater
Yorkville Theater
5th Avenue Baptist Church

Niagara Falls, N. Y.

Bellevue

Northampton, Mass.

Calvin Theater
Masonic Temple

Norwich, Conn.

Palace Theater

Oakland, Calif.

Civic Auditorium
Roosevelt High School
Mount Clymonds High School
University High School

Ocean Park, Calif.

Rosemary Theater
Dome Theater

Ogden, Utah

Peery's Egyptian Theater

Oklahoma City, Okla.

Masonic Temple
Auditorium
Criterion Theater

Olympia, Wash.

Capitol Theater
Liberty Theater

Omaha, Nebr.

Commercial & Technical
High School
Knights of Columbus Building
Moon Theater
North Side High School
Suburban Theater
Worlds Realty Theater

Ottawa, Canada

Loew's Theater

Parkersburg, W. Va.

Masonic Temple

Parsons, Kansas

High School
Municipal Building

Pasadena, Calif.

Scottish Rite Cathedral

Passaic, N. J.

Montauk Theater
Rialto Theater

Pawtucket, R. I.

Leroy Theater

Penn Yan, N. Y.

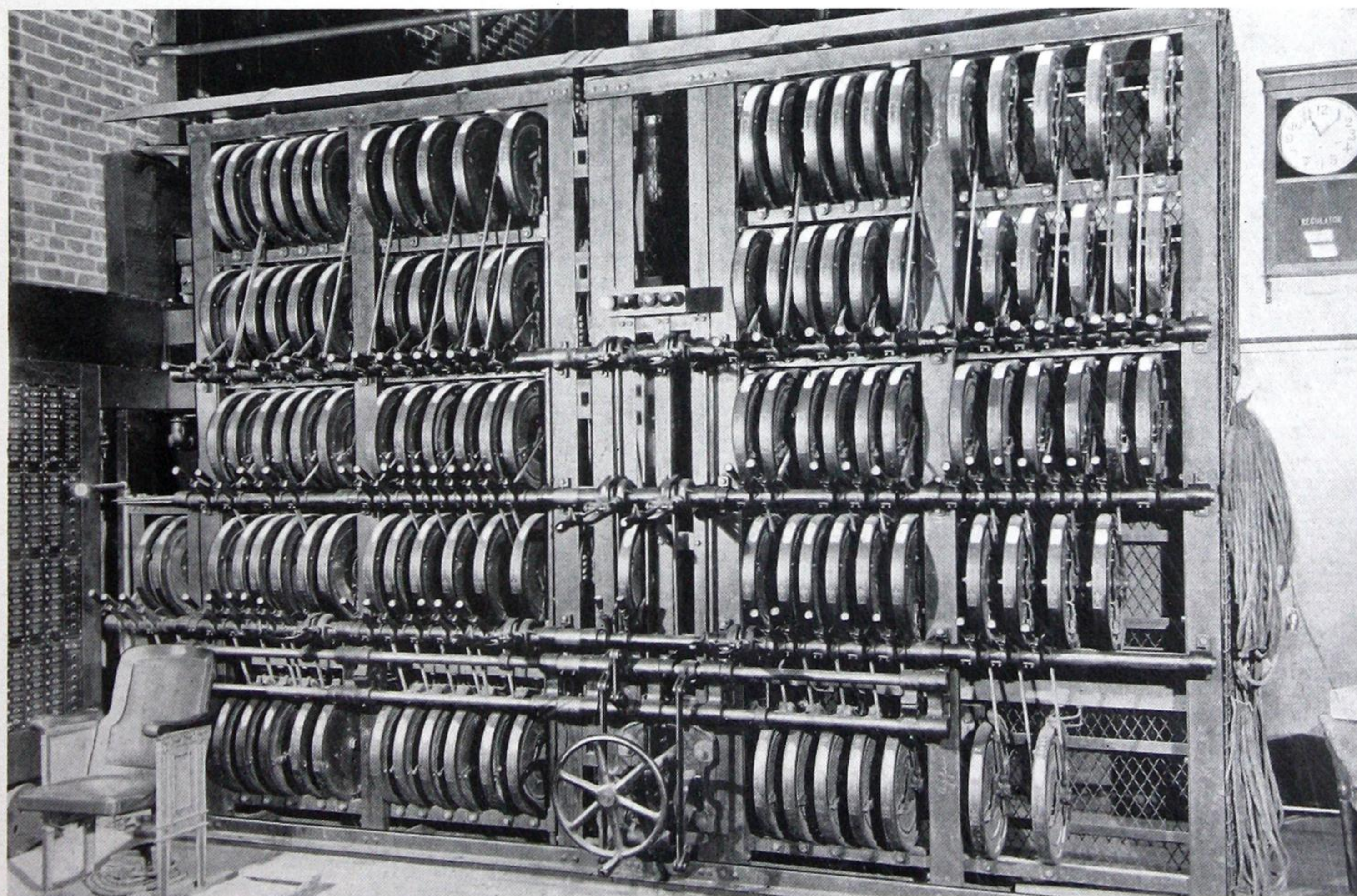
Elmwood Theater

Pensacola, Fla.

Pensacola Theater
Saenger Theater

Peoria, Ill.

Ascher's Palace Theater



Showing five banks of C-H "Simplicity" Dimmer Plates provided with a master slow motion hand wheel drive — in the Lafayette Theater, Buffalo.

Philadelphia, Pa.

Academy of Music
Adelphi Theater
Allegheny Theater
Belmont Theater
Broad Street Theater
Broadway Theater
Casino Theater
Chestnut St. Opera House
Colonial Theater
Sumont's Theater
Forrest Theater
Frankford Theater
Garrick Theater
Gayety Theater
Grand Opera House
Keith's Theater
Keystone Theater
Knickerbocker Theater
Liberty Theater
Lyric Theater
Masonic Temple
Metropolitan Opera House
Orpheum Theater
Palace Theater
People's Theater
69th Street Theater
Standard Theater
Strand Theater
Stanley Theater
Shubert Theater
Trocadero Theater
Victoria Theater
Walnut Theater
Wm. Penn Theater

Phillipsburg, Pa.

Towland Theater

Pine Bluff, Ark.

Pine Bluff Theater
Saenger Theater

Pittsburgh, Pa.

Academy
Alvin
Gayety
Carnegie Institute of
Technology
Davis
Grand
Harris
Heinz Auditorium
Liberty
Loew's Aldine
Masonic Temple
Nixon
Olympic
Pershing Theater
Pitt Theater
Schenley Theater
Spang Chalfant Community
House
Syria Mosque
Palace Theater

Pittsfield, Mass.

Union Square Theater

Plainfield, N. J.

Bijou

Pocatello, Idaho

Idaho Technical Institute

Pontiac, Mich.

Strand Theater

Pomona, Calif.

Pomona High School

Portland, Me.

Deering High School

Portland, Ore.

Alhambra Theater
American Theater
Portland Auditorium
Bob White Theater
Blue Mouse Theater
Circle Theater
Columbia Theater
Egyptian Theater
Hawthorne Theater
Heilig (also known as
Orpheum) Theater
Hippodrome Theater
Hudson Colonial Theater
Irvington Theater
Jefferson Theater
Laurelhurst Theater
Liberty Theater

Quincy, Mass.

Alhambra Theater
Quincy Theater

Racine, Wis.

Memorial Hall

Reading, Pa.

Rajah Temple

Richmond, Utah

North Cache High School

Richmond, Va.

Colonial Theater
National Theater

Roanoke Rapids, N. C.

Peoples Theater

Rochester, N. Y.

Eastman School of Music
Piccadilly
Temple

St. Louis (Continued)

Criterion Theater
Empress Theater
King's Theater
Lindell Theater
Loew's State Theater
Missouri Theater
Moolah Temple
Municipal Theater
New Grand Central Theater
Orpheum Theater
Pageant Theater
Pershing Theater
Rialto Theater
Rivoli Theater
St. Anthony School
St. Louis Theater
Scottish Rite Cathedral
West End Lyric Theater

St. Paul, Minn.

Capitol Theater

Salem, Mass.

Salem Masonic Temple

Salina, Kans.

Memorial Building

Salt Lake City, Utah

Pantages Theater
Elks' Building
Masonic Temple
West High School
East High School
Orpheum Theater
Wilkes Theater

San Antonio, Texas

Auditorium

San Diego, Calif.

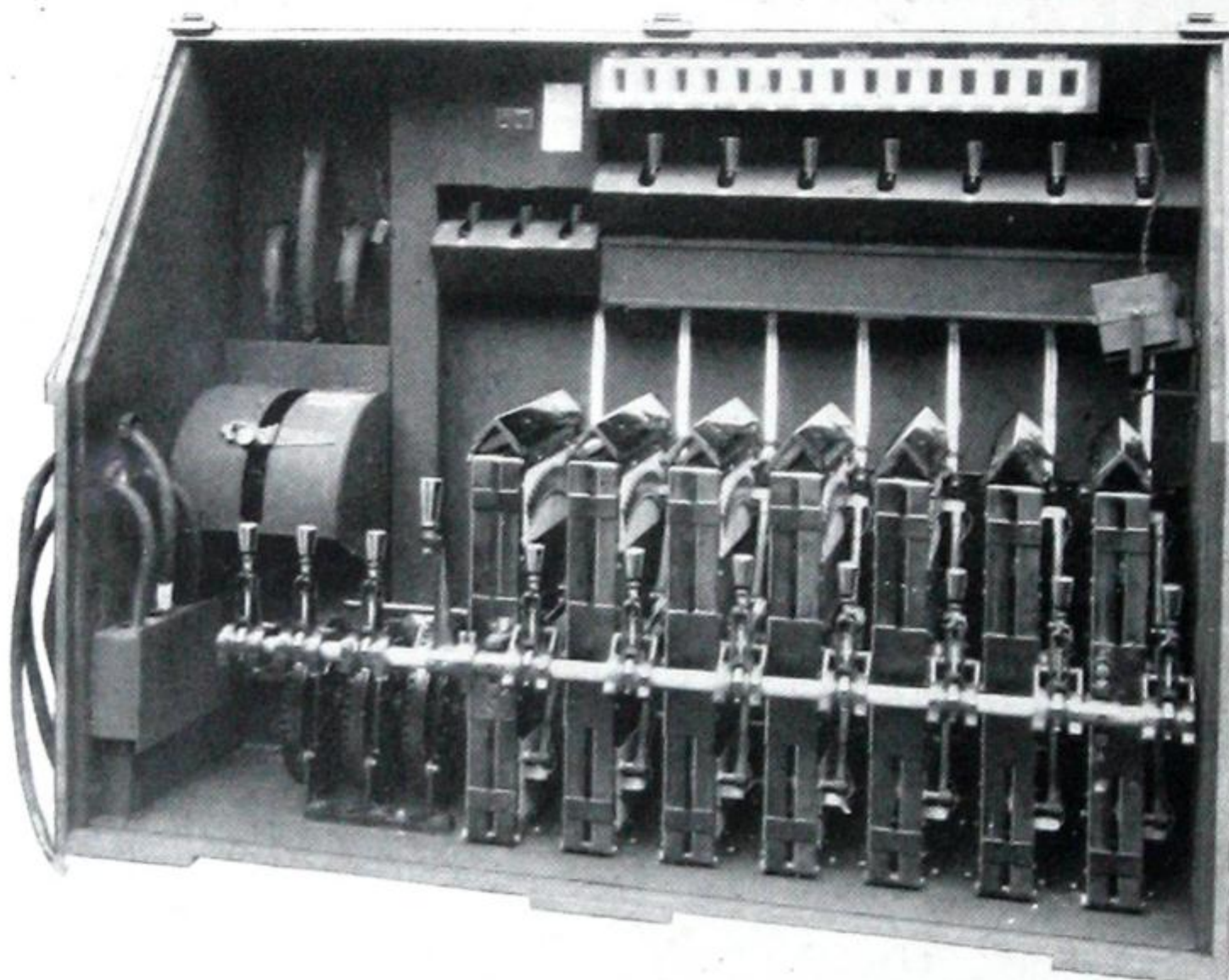
Balboa Theater
Pantages Theater

Sanford, Me.

Sanford Masonic Temple

San Francisco, Calif.

Alcazar Theater
California Palace of the
Legion of Honor
California Body Scottish Rite
Temple
Civic Auditorium
Columbia Theater
Capitol Theater
Casino Theater
Cameo Theater
Curran Theater
Egyptian Theater
Fairmont Hotel
Golden Gate Jr. Theater
~~Granada Theater~~
Imperial Theater
Loew's Warfield Theater
New Fillmore Theater
New Mission Theater
Orpheum Theater
Orpheum Jr. Theater
Palace Hotel
Pantages Theater
President Theater
Republic Theater
San Francisco Body Scottish
Rite Temple
St. Francis Hotel
St. Francis Theater
Union Square Theater
Wilkes Theater
Women's Club



*High capacity ventilated type portable dimmer
manufactured by C-H and assembled in shipping
and operating cabinet by Display Stage Lighting
Co., New York.*

Portland (Continued)

Majestic Theater
Nob Hill Theater
Pantages Theater
People's Theater
Rivoli Theater
Sellwood Theater
Victoria Theater
Walnut Park

Portsmouth, N. H.

Colonial Theater
Pastime Theater

Providence, R. I.

Emory Theater
Keith's Theater
Majestic Theater
Modern Theater
Strand Theater

Provo, Utah

Meno Trope Memorial High
School
Provo High School

Rock Island, Ill.

Fort Armstrong Theater

Rock Springs, Wyo.

Elysium Theater

Roslindale, Mass.

Roslindale Masonic Temple

Roxbury, Mass.

Elliott Hall
Hibernian Hall
Hyde Square Theater

Saginaw, Mich.

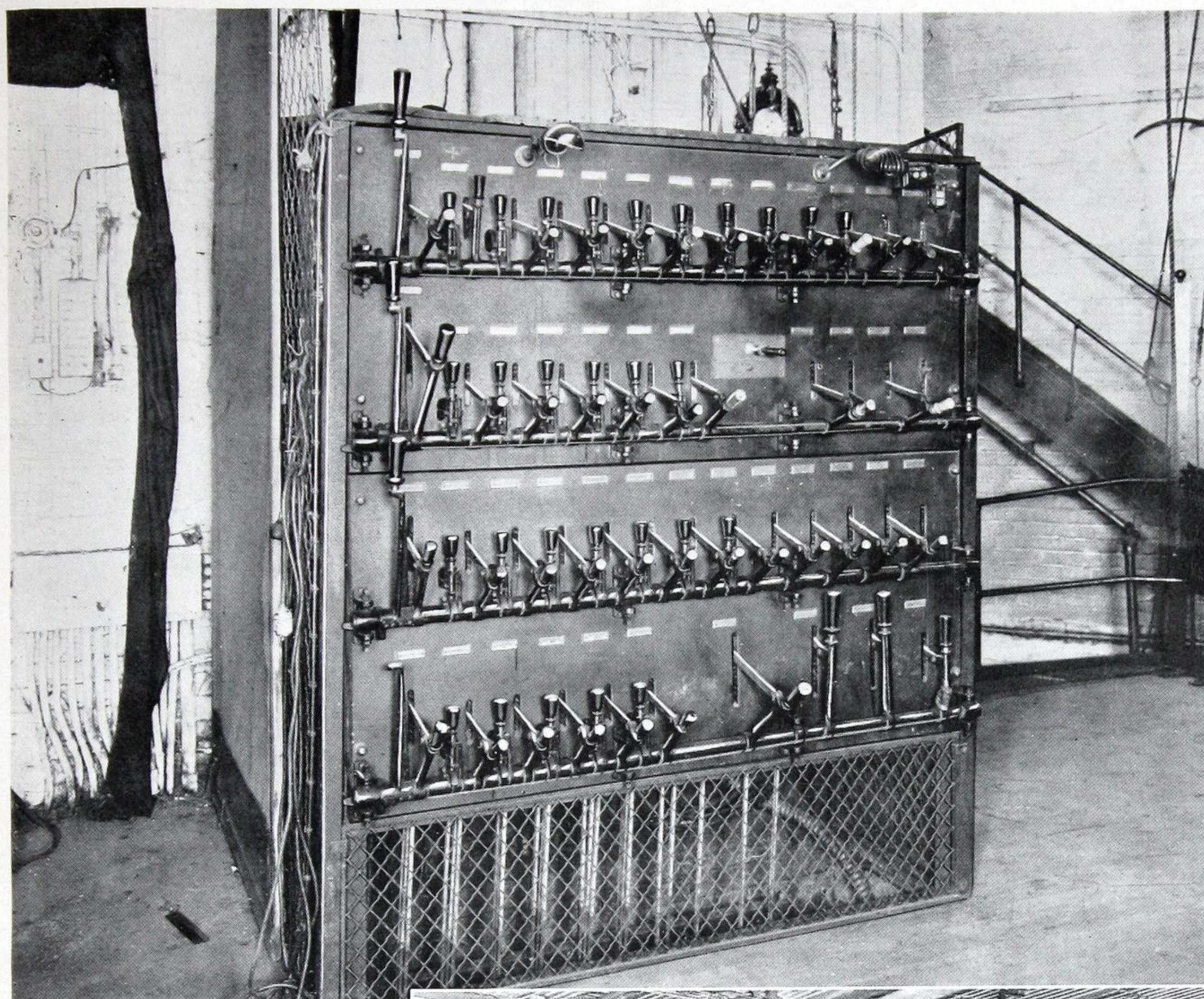
Saginaw Central Jr. High
School

St. Cloud, Minn.

Schaeffer Theater

St. Louis, Mo.

American Theater
Capital Theater
Chase Hotel
Cinderella Theater
Coronado Hotel



An unusual installation providing direct operation of the dimmer, with the plates in the basement and the dimmer levers on the stage is found in the Pitt Theater, Pittsburgh.

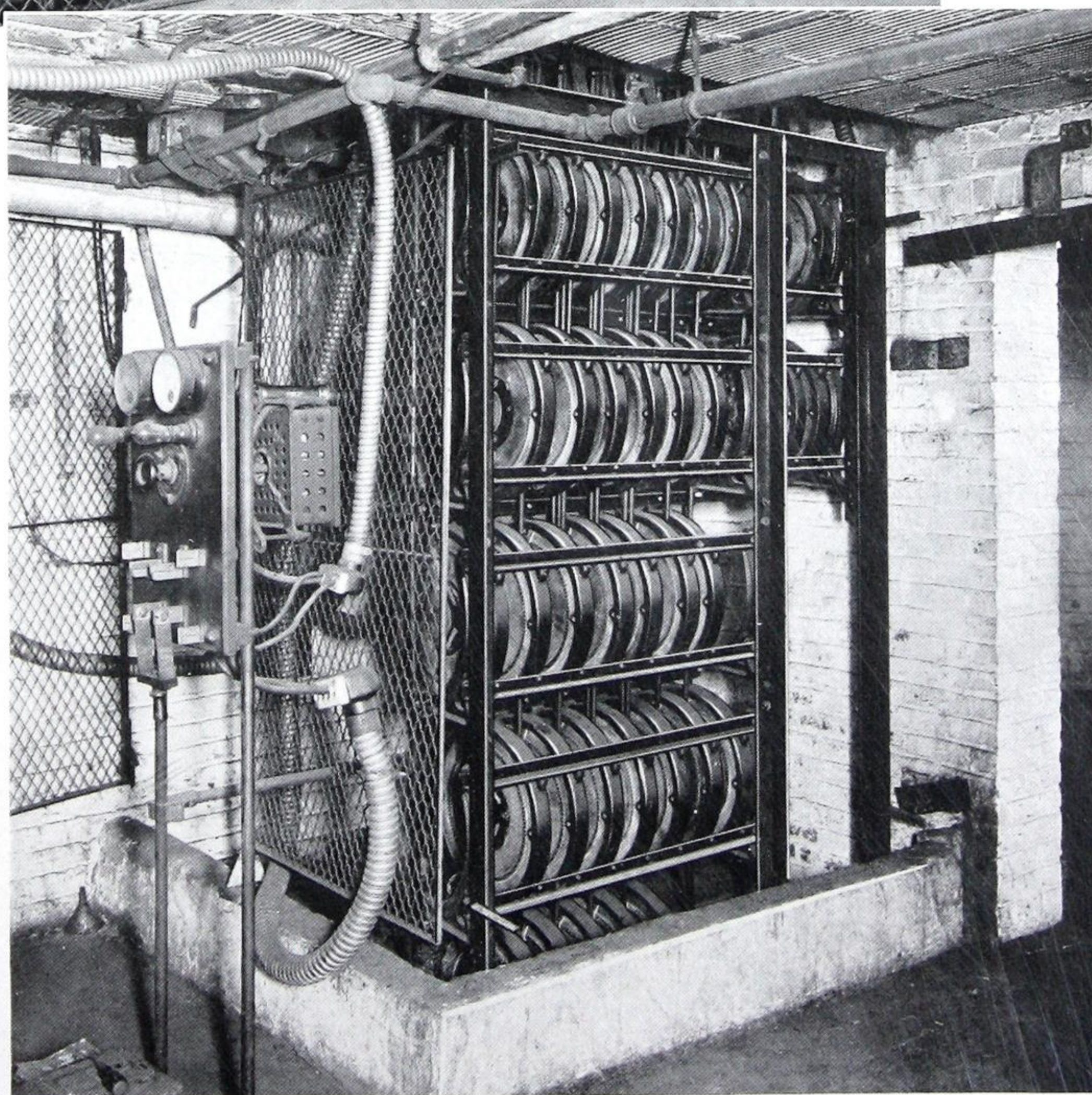
San Mateo, Calif.
San Mateo Theater

Santa Barbara, Calif.
LaBera Theater

Santa Monica, Calif.
LaMonica Ballroom

Santa Rosa, Calif.
Burbank Theater

Seattle, Wash.
Angier Theater
Blue Mouse Theater
Broadway Theater
Capitol Theater
Coliseum Theater
Columbia Theater
Eagles Temple
Finnish Club
Franklin High School
Garfield High School
Heilig Theater
Hollywood Theater
Liberty Theater



Seattle, (continued)

Madrona Garden Theater
Masonic Temple
Metropolitan Theater
Moore Theater
Neptune Theater
Palace Hippodrome Theater
Paramount Theater
Pantages Theater
Queene Anne Theater
Roosevelt High School
Scottish Rite Cathedral
Strand Theater
Temple de Hirsh
Winter Garden Theater

Sharon, Pa.

Columbia Theater

Sheboygan, Wis.

Sheboygan High School

Sheffield, Ala.

High School Auditorium

Shreveport, La.

Saenger Theater
Shreveport Junior High School

Sioux City, Iowa

Masonic Temple

Somerville, Mass.

Somerville Theater
Teale Square Theater

So. Bend, Ind.

Palace Theater

South Hibbing, Minn.

Elks Temple

Spokane, Wash.

Masonic Temple

Springfield, Ill.

Abraham Lincoln Hotel
K. of C. Building

Springfield, Mass.

Broadway Theater
Capitol Theater
Elks' Lodge
Masonic Temple

Springfield, Ohio

Masonic Temple

Steubenville, Ohio

Grand Theater
Victoria Theater
Masonic Hall
K. or P. Hall

Stockton, Calif.

Civic Auditorium
College of the Pacific

Suffern, N. Y.

Suffern Theater

Syracuse, N. Y.

B. F. Keith's Theater

Tacoma, Wash.

Elks Club
Pantages Theater
Rialto Theater

Tamaqua, Pa.

Majestic Theater

Terre Haute, Ind.

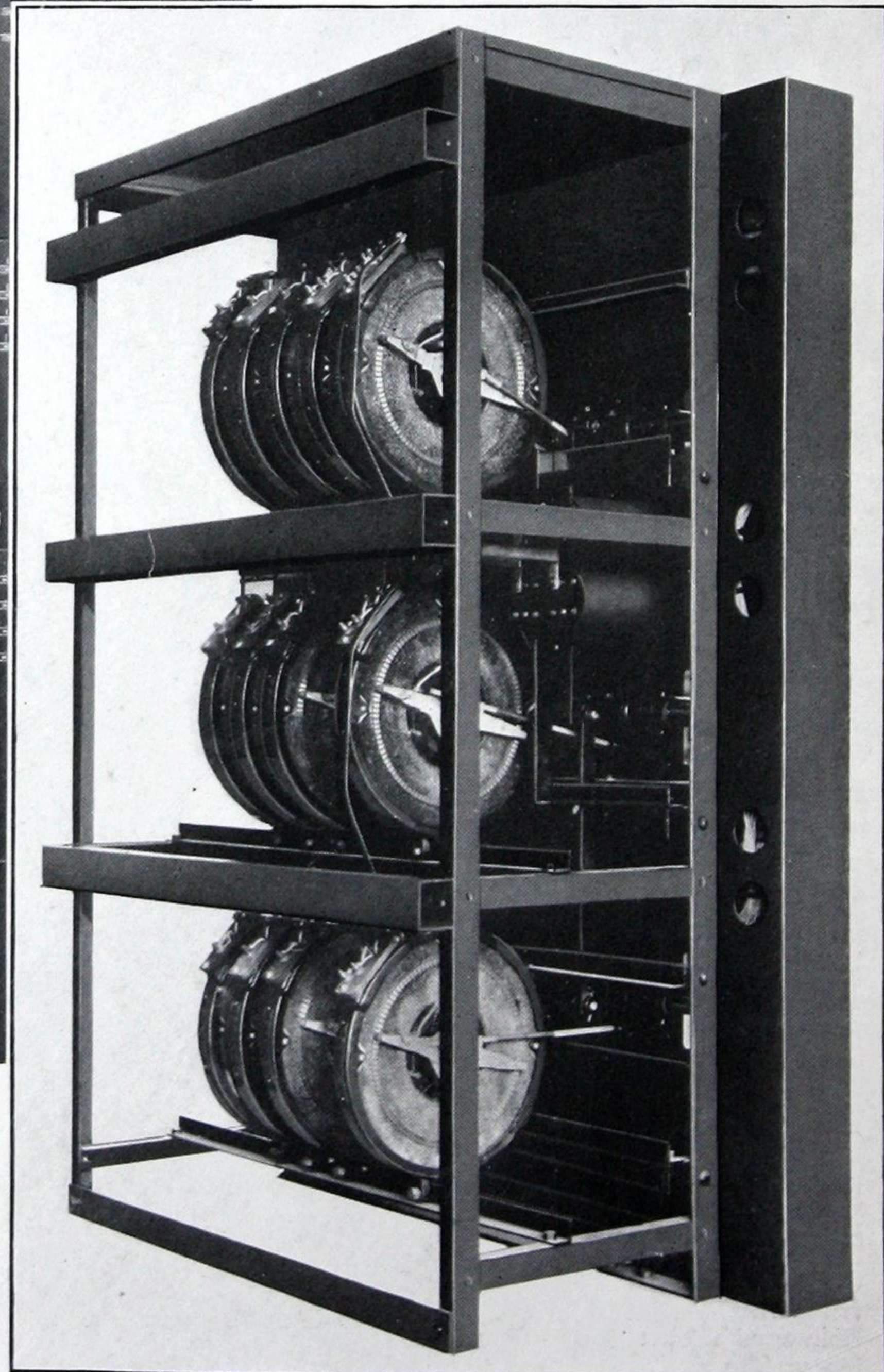
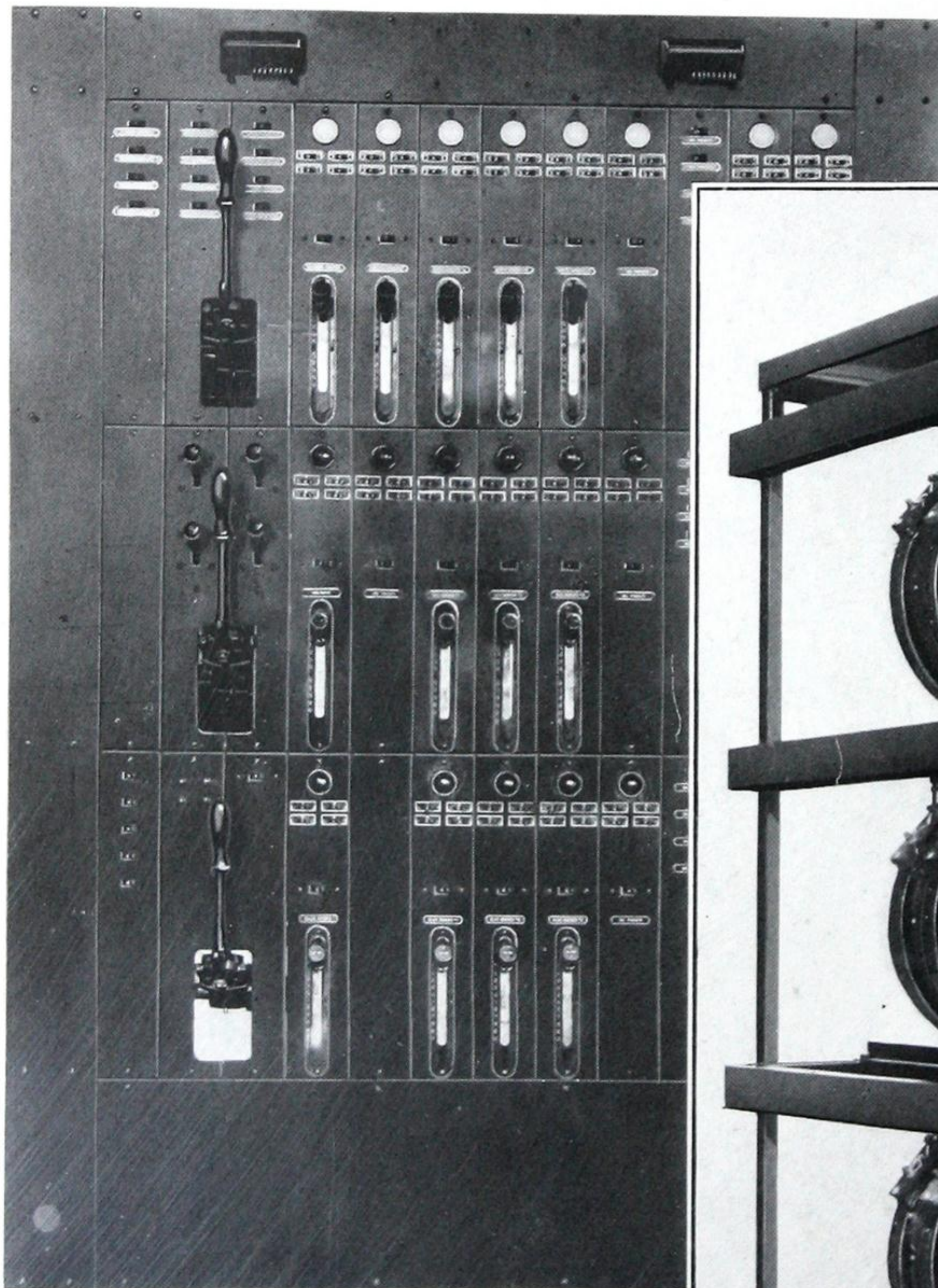
Indiana Theater

Texarkana, Texas

Saenger Theater

Tipton, Iowa

Consolidated High School



Showing the Cutler-Hammer "Simplicity" Dimmer equipment and Major (F. A.) control board installed at the University of South Dakota. These views illustrate well, the direct, neat control provided by mounting the dimmers behind the board.

Toledo, Ohio
Rivoli Theater
Regent Theater

Topeka, Kans.
Masonic Temple
Boswell School

Toronto, Canada
Pantages Theater

Towanda, Pa.
Towanda Theater

Troy, N. Y.
Troy Theater

Traverse City, Mich.
Lyric Theater

Tulsa, Okla.
Akdar Temple
Alhambra Theater
New Orpheum Theater

Upper Montclair, N. J.
Upper Montclair Theater
Woman's Club

Utica, N. Y.
Colonial Theater
Star Theater

Venice, Calif.
Venice Ballroom

Vermillion, South Dakota
University of South Dakota

Waltham, Mass.
Waltham Masonic Temple

Warren, Ohio
Opera House

Washington, Pa.
Capitol Theater
Jefferson Theater

Washington, D. C.
B. F. Keith's Theater
Palace Theater
Wardman Park Theater

Waterbury, Conn.
Duggan School
Polis Theater

Watertown, Mass.
Kingsley Theater

Watts, Calif.
Ferton Theater

Waynesburg, Pa.
Montgomery Building

Webster City, Iowa
High School

Weirton, W. Va.
State Theater

Wellington, Kans.
Memorial Bldg.

Wellsburg, W. Va.
Masonic Hall

Weston, Mass.
Municipal Bldg.

Wheeling, W. Va.
Rex Theater
Scottish Rite Cathedral

Wichita, Kans.
High School
Miller Amusement Co.
Orpheum Jr. Theater

Winona, Minn.
State Teachers' College

Worcester, Mass.
Masonic Lodge
Park Theater
Royal Theater
Strand Theater

Yakima, Wash.
Liberty Theater

Yonkers, N. Y.
Benj. Franklin High School
Gorton High School
Nathaniel Hawthorne High
School
Theodore Roosevelt High
School

York, Pa.
Strand Theater

Youngstown, Ohio
Hippodrome
Park Theater
Ursaline Convent



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CUTLER-HAMMER Theater Dimmers are designed and constructed to stand up through years of continuous service, giving an unequalled perfection of illumination control at a maintenance cost that is practically nil. Their universal use in the finest and most modern theaters today is thus explained.

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